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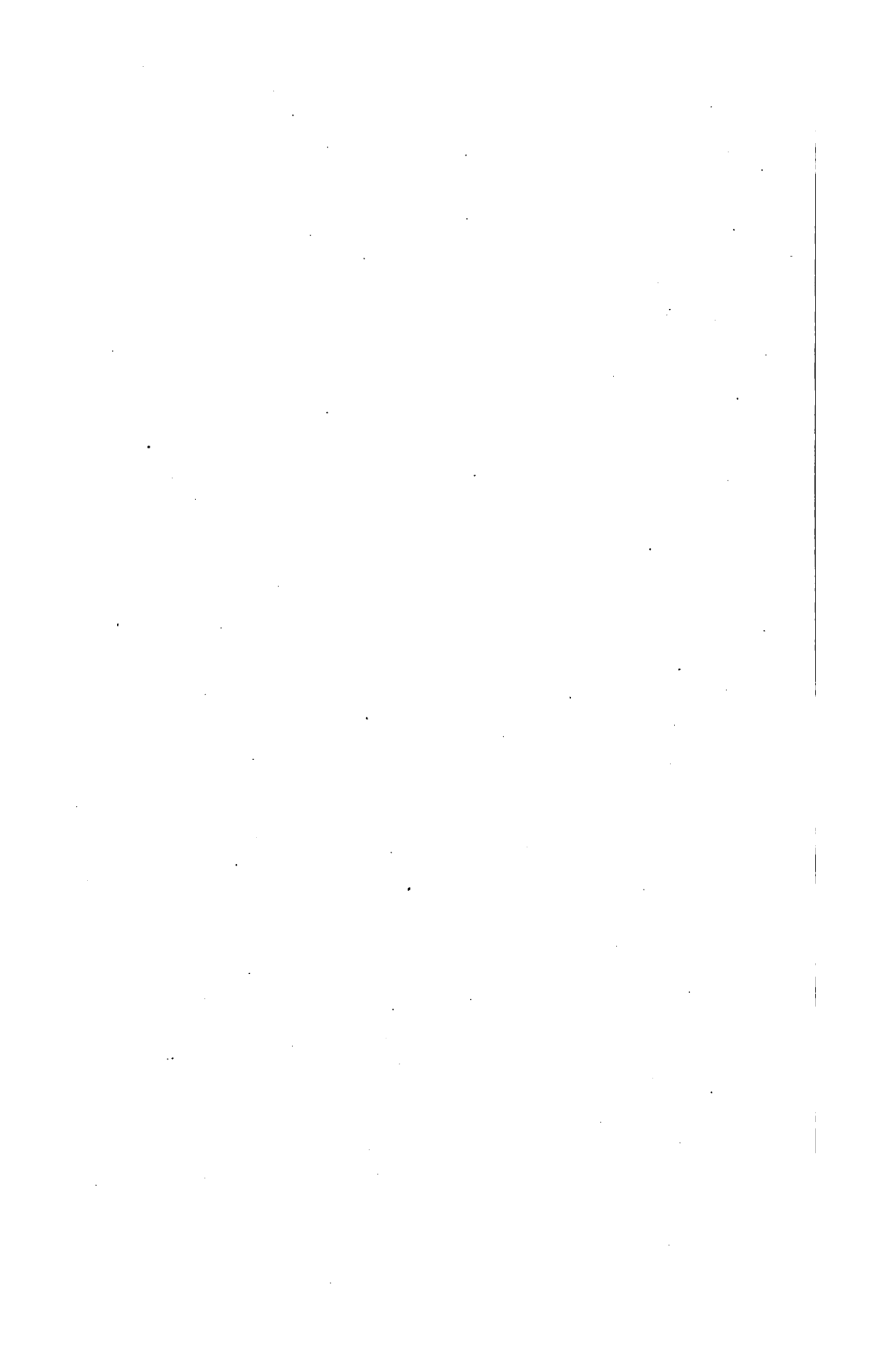


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# HAND-ROLLER v. POWER PRESSES

HG 573  
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1912 &

## HEARING

BEFORE THE

## COMMITTEE ON PRINTING <sup>394</sup>/<sub>931</sub> UNITED STATES SENATE

SIXTY-SECOND CONGRESS

ON

### S. 4239

A BILL TO AMEND, REVISE, AND CODIFY THE LAWS RELATING  
TO THE PUBLIC PRINTING AND BINDING AND THE DIS-  
TRIBUTION OF GOVERNMENT PUBLICATIONS

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JANUARY 29-FEBRUARY 14, 1912

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Printed for the use of the Committee on Printing

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### WITH INDEX

WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1912



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## HAND-ROLLER v. POWER PRESSES.

MONDAY, JANUARY 29, 1912.

UNITED STATES SENATE,  
COMMITTEE ON PRINTING,  
Washington, D. C.

The committee met at 7.30 p. m.

Present: Senators Smoot (acting chairman), Gallinger, Page, Kenyon, and Chilton.

Hon. Benjamin K. Focht, a member of the Joint Committee on Printing, also attended.

There were present also: Hon. A. Piatt Andrew, Assistant Secretary of the Treasury; Mr. Joseph E. Ralph, Director of the Bureau of Engraving and Printing; Mr. William Clark, president of the Steel and Copper Plate Printers' Union of North America, Local No. 2; Mr. S. E. Beach, chairman of the executive committee of the Plate Printers' Union; Mr. Jackson H. Ralston, attorney for the Plate Printers' Union; Mr. Frank E. Ferguson, assistant director; Mr. William C. McKinney, chief, printing division; and Mr. Charles H. Randall, foreman power-press section, Bureau of Engraving and Printing; and a delegation of plate printers.

In the absence of Senator Richardson, chairman of the committee, Senator Smoot, upon the motion of Senator Gallinger, duly seconded, was chosen as acting chairman.

Senator SMOOT (acting chairman). Members of the committee and gentlemen, this meeting has been called for the purpose of hearing representatives of the plate printers' union and others who may desire to speak, or are interested in the question before the committee, which is as to the desirability of using power presses instead of hand presses in the printing of currency.

I wish to say in the beginning that it is and shall be the intention of this committee to hear everybody desiring to be heard. They will be given all the time they desire, and if we can not get through tonight we will have other meetings. So far as I am personally concerned, testimony shall be taken until it is demonstrated, if such a thing should happen, and I do not think it will, that there is only an inclination to delay. I want every person interested in this question to have all the time to speak he may desire. It is one that not only affects the plate printers, but affects the interests of the Government. I do not believe there is a member of this committee who wishes to injure anyone. The committee has the interests of all concerned at heart.

Invitations were extended to the following persons to be here tonight: Members, of course, of the Senate Committee on Printing; members of the House Committee on Printing; the Secretary of the Treasury; Assistant Secretary of the Treasury, Hon. A. Piatt Andrew, who is in charge of the fiscal division of the Treasury Department; Mr. Joseph E. Ralph, Director of the Bureau of Engraving and Printing; Mr. Samuel Gompers, president of the American Federation of Labor; Mr. William Clark, president of the Steel and Copper Plate Printers' Union, accompanied by a committee and attorney; and members of the printing division of the Bureau of Engraving and Printing—namely, Mr. William C. McKinney, chief of the printing

division, and Mr. Charles H. Randall, foreman of a power-press section.

I am in receipt of a letter from the Secretary of the Treasury, stating that on account of a previous engagement he can not attend the meeting to-night, but will be represented by the Assistant Secretary, Mr. Andrews. I am also in receipt of a letter from Mr. Samuel Gompers, president of the American Federation of Labor, stating that on account of a meeting compelling him to be in New York this evening it will be impossible for him to be here, but that he will be represented by the legislative committee of the American Federation of Labor.

At this point, gentlemen of the committee, if you have no objection, I will offer as a part of these hearings the hearings had and the report made thereon in the Fiftieth Congress, second session, when this same question was gone into most carefully. This is a hearing of much importance; it has been referred to in the public press, and I believe every Member of the House and every Member of the Senate will want at least a copy of that hearing and the report thereon for their information. Therefore, I believe that the entire proceedings to which I have called attention should be made a part of these hearings.

Senator GALLINGER. Those are the hearings had before the Senate Finance Committee, which were printed, are they not?

Senator SMOOT. That is correct; and Senator Hiscock, of New York, made the report. The hearings were held in 1888 and 1889. If there be no objection, I shall offer them as a part of these proceedings.

There was no objection, and the hearings and report thereon (S. Rept. No. 2604, 50th Cong., 2d sess.) were printed separately as an appendix to these hearings.

Senator SMOOT (continuing). We have no special program mapped out, but I suppose that in justice to the plate printers, they being deeply interested in this subject, some statement should be made as to why this move has been taken, the object of it, and what we expect to accomplish by it. That being the case, I believe that it is only fitting and proper that Mr. Ralph, Director of the Bureau of Engraving and Printing, should make the first statement.

Senator GALLINGER. Mr. Chairman, before Mr. Ralph proceeds, I think it would be well to put in the record the existing law and the modification of it that is proposed in the bill.

Senator SMOOT. If there be no objection the existing law and the proposed modification thereof will be put in the record at this point.

There was no objection, and the existing law and proposed modification are as follows:

*Reported bill.*

SEC. 85. Hereafter all bonds, notes, and checks shall be printed from intaglio plates on presses of such style and character as may be determined by the Secretary of the Treasury: *Provided*, That should the Secretary of the Treasury decide to print bonds, notes, and checks on other presses than hand-roller presses, not more than one-fifth of the total number of hand-roller presses now employed in printing such bonds, notes, and checks shall be displaced in any one fiscal year.

*Present law.*

*Provided further*, That hereafter all bonds, notes, and checks shall be printed from hand-roller presses. (30 Stat. L., 605, July 1, 1898.)

**STATEMENT OF MR. JOSEPH E. RALPH, DIRECTOR BUREAU OF ENGRAVING AND PRINTING.**

Mr. RALPH. Mr. Chairman and gentlemen, I suppose this is a hearing on the so-called Smoot printing bill which contains a provision for the introduction of power presses at the Bureau of Engraving and Printing, specifying how they shall be introduced, and so forth?

Senator SMOOT. Yes; that provision is found in section 85 of the bill.

Mr. RALPH. Yes, sir. Now, Mr. Chairman, what was the statement you desired me to make?

Senator SMOOT. We desire you to make a statement, Mr. Ralph, a full statement, of what we expect to accomplish by a change in the present law, the economies we wish to effect, whether the proposed change is a feasible one, whether there is any greater likelihood of currency printed upon power presses being counterfeited than that printed upon hand presses, and any other question that may suggest itself to your mind, or that may be asked of you later on.

Mr. RALPH. Mr. Chairman, I desire first to offer my letter, addressed to you under date of January 31, 1911, relative to your bill, and to ask that it be made a part of my statement.

There being no objection it was so ordered, and the letter referred to is as follows:

TREASURY DEPARTMENT,  
BUREAU OF ENGRAVING AND PRINTING,  
*January 31, 1911.*

SIR: In response to your request for an expression of opinion from me as to the practicability of printing United States notes and certificates on power presses instead of on hand-roller presses, as provided by the requirements of the act of July 1, 1898, I have the honor to state that heretofore I have been opposed to the repeal of the legislation provided for in the aforesaid act, for humanitarian reasons.

I feel proud of the splendid character of the men employed in this bureau as plate printers. They are above the average artisan intellectually and otherwise. Nearly all of these men entered the service through the Civil Service Commission, believing that they had a life tenure of position so long as they faithfully and efficiently performed their duties. A great majority of these men, in fact nearly all of them, are now paying for homes which they have purchased. It is also true a great majority of them have passed the middle age of life, and to separate any portion of them from the positions which they now hold, through no fault of their own, by the introduction of improved machines would, in my judgment, be a calamity and work a great hardship upon the men thrown out of employment. Hence, under those conditions, I would not recommend the repeal of that act on my own motion.

But, inasmuch as you intend to provide in your codification of the printing laws a proviso that no good and efficient man now employed as a plate printer in this bureau shall be displaced through the introduction of power presses, I am willing to go on record and state that in my opinion there is no doubt that the backs of notes and certificates and the backs of national-bank notes can be printed in a satisfactory manner on power presses, and in a style that will just as well safeguard the Government against counterfeiting as by printing them on hand-roller presses.

The specimens of \$1 silver certificate faces recently printed on power presses for use of your committee were the first faces of notes ever printed on power presses in this bureau, and because of the hurry of producing them they were printed under adverse conditions for the press. The excellent results obtained, however, under these unfavorable conditions clearly show that it will be practicable to print faces in a perfectly satisfactory manner, with a single exception—that it is possible that the plates will show greater wear on the power press than on the hand-roller press, which would necessarily shorten the life of the plate; but this can be overcome by engraving the lines of the design of face plates to a greater depth and width, so as to increase the life of the plate.

The good appearance of these faces printed on power presses is shown by comparing them with the specimens of hand-press work also submitted, and which were executed

in the proving room of the engraving division of the bureau under the best possible conditions and which represent the highest grade of the art of hand plate printing. In the proving room the provers, who are plate printers, are paid per diem wages and can therefore do their work in a deliberate manner with the view to obtaining perfection in every print, while the regular work of the bureau is executed by printers who are paid piece rates and who are naturally anxious to produce the greatest quantity in order to receive the highest compensation and, in fact, on account of the scarcity of first-class printers they are stimulated in exerting their efforts to increase the product of their day's work by the officers of this bureau, and the average quality of their work is therefore not equal to that work which might be termed the highest class of the art done by the provers.

If the matter of using the power press on bonds, notes, and checks were left to my discretion I should, without hesitation, print the backs of the notes on the power press with a guaranty that the standard now being maintained by the bureau would not be lowered, and in the course of time, having in view the retention in the service of all good and efficient men now employed, I would endeavor to print the faces also on the power presses, and if I should find that the quality of the work executed by the power press was not equal to the average standard of hand-roller presswork, I would then continue to print the faces on hand-roller presses operated by a motor.

I feel confident that the power presses could be introduced in such units as not to jeopardize the employment of men now borne on the rolls of the Bureau of Engraving and Printing as plate printers, especially as the provision in your bill which provides that not more than 20 per cent of the work now executed on hand-roller presses shall be displaced in any one year is not mandatory, and if it was felt that the positions of any of the men now employed were to be vacated by the maintenance of that percentage the Secretary of the Treasury and the executive officer of the bureau could, under this provision, displace a less number of hand presses if necessary. The possibility of the exercise of this discretion would be reduced, however, by the fact that the number of available printers would be decreased to some extent by printers engaging in other employment, by death, and by discontinuing the employment of apprentices until such time as the force now employed had been provided for.

The demands on this bureau by the Treasurer of the United States for the present year are such that if the appropriation would permit, and the capacity of the bureau could be expanded to meet the demands, I would deliver the Treasurer 50 per cent in excess of the amount estimated for. This unusual demand is brought about, not only by the expansion of the business of our country, but is also due to the fact that the people are becoming educated to the needs and the advantages of cleaner money, and the money is being sent in for redemption in such large quantities that the Treasurer is unable to redeem it, and this bureau unable to execute the necessary amount of new notes.

I really believe that the repeal of the statutory provision which regulates the printing of our bonds, notes, and checks, which the plate printers might consider a calamity, would in five years prove a great blessing to the men of this craft now employed in the bureau. The material advantages to a printer on a power press, as compared to the hand press, are that on a power press he is enabled to perform a greater quantity of work with less physical labor, and at the same time earn from 30 to 40 per cent more in wages per day, and it is a notorious fact in the administration of the bureau that the printers, after working regularly on power presses, exhibit the greatest reluctance to operate hand presses. The same arguments with regard to lowering the standard of printing were advanced by printers when it was proposed to print revenue stamps on power presses, but these stamps have now been for some time successfully printed on the power presses.

Postage stamps are also very satisfactorily printed on power presses, and the improvement in the life of the plates by engraving a design suitable for power-press printing is conclusively shown by comparison between the life of the plates used for printing the present series of stamps and those used for printing the previous series, plates for the latter producing only an average of 68,000 sheets, while a plate of the present series will produce an average of 236,000 sheets, this result being brought about principally by adopting a suitable design of engraving with greater breadth and depth of lines without a sacrifice of any essential features as to security, beauty, etc., but is also due to some improvement in the wiper and other features of the press. The work produced by the power presses on the classes of stamps printed thereon has been so satisfactory there has been little or no incentive toward improving the operation of the presses, but if the backs and faces of notes were printed on these presses there would be an inducement to improve them, and this would no doubt be accomplished.

While the backs of bank notes, as above stated, can be printed on power presses as well as the backs of notes and certificates, it would not be feasible to print the faces of

bank notes thereon for the reason that such notes for the many banks are of different designs, for which small orders are received which would not permit long runs as desired on power presses, and this same statement applies to bonds which, as a rule, are ordered in small quantities and vary in their wording. There would, therefore, even if the power presses were required for printing faces as well as backs of notes, be a necessity for at least 100 hand-plate printing presses for the national-currency faces and for bonds.

Respectfully,

J. E. RALPH, *Director.*

Hon. REED SMOOT,

*Chairman Committee on Printing, United States Senate.*

Mr. RALPH (continuing). I wish to state, and to state it as emphatically as possible, that if I felt that by the introduction of power presses injury would accrue to a single plate printer, I would shirk the duty imposed upon me to-night.

I have been a friend of the plate printers, Mr. Chairman, ever since I have been in the bureau, and they have been my friends. I have been a workman, and I have been identified with organized labor all my life. I am a friend of organized labor, and I am a friend of the men who are assembled here to-night. And rather than being a calamity, as the men interpret it, I wish to go on record as saying that if this bill passes, and five years hence all the work is placed on power presses, it will be a blessing rather than a calamity.

Mr. Chairman, when we had the conference at the residence of the Secretary of the Treasury, which was the first time the question was taken up by me with yourself, in the presence of the committee, most of whom are here assembled, I was hopeful at that time, out of friendship for the men, that we could compromise this matter by only printing backs on the presses, but subsequently I had a request from the Assistant Secretary of the Treasury in the form of a letter, under date of January 16, 1911, which, with the permission of the committee, I will read.

The letter is as follows:

TREASURY DEPARTMENT,  
*Washington, D. C., January 16, 1911.*

THE DIRECTOR OF THE BUREAU OF ENGRAVING AND PRINTING.

DEAR SIR: Will you please prepare five impressions of the \$1 silver certificate printed by hand presses and five impressions of the \$1 silver certificate printed by power presses. You will please eliminate the signatures and seals from these impressions, so as they can not under any circumstance be considered as United States currency. You will please mark these impressions "specimen." I desire to have these specimens printed for the use of the Senate Committee on Printing at the request of the chairman.

Yours, truly,

A. PIATT ANDREW,  
*Assistant Secretary.*

Before doing that I called in Mr. Foster, then chief of the executive committee, and asked him if he had any objections to it. I did this for the reason that I felt they were interested. He said, no. So we caused to be prepared a plate, and we had printed from it some impressions in the engraving division by one of the most expert printers we had in the bureau, and a staunch friend of the union. Then we took that plate down to the power-press room and we placed it on the power press, and we printed therefrom a number of impressions in the presence of Mr. Foster, Mr. McKinley, superintendent of printing; Mr. Ferguson, Mr. Randall, foreman of that room, and the printer.

In connection with that I wish to offer, as a matter of record, a statement of the printer who printed those impressions.

Mr. RALSTON. May I make a brief statement there, Mr. Chairman? I appear here on behalf of the plate printers' union. I do not feel that it is at all proper for me to object to any statement that Mr. Ralph might care to make, but I want to submit the question to the committee, that if any statements are to be received from any persons other than Mr. Ralph, those statements should be under the sanctity of an oath. My objection to this particular document is that it does not appear to be under that sanction.

Mr. RALPH. I will subscribe to this, Mr. Ralston.

Mr. RALSTON. I think that my clients feel that they are entitled to the additional protection that the sanctity of an oath would give the testimony that is to be adduced.

Senator SMOOT. Is that satisfactory, Mr. Ralston—Mr. Ralph's saying he will subscribe to that?

Mr. RALPH. I will ask the other men present——

Mr. RALSTON. Of course, Mr. Ralph, can not subscribe to what somebody else says. That man must speak for himself. What Mr. Ralph individually says I have no objection to his saying.

Mr. RALPH. I shall have the stenographer who took the statement subscribe to it.

Senator KENYON. What does this purport to be?

Mr. RALPH. A statement given by the printer to Mr. Ferguson and myself.

Mr. RALSTON. That is not an examination before this committee.

Senator SMOOT. As I understand it, this was a statement made by him, showing what he did in relation to the printing?

Mr. RALPH. The conditions under which he printed the notes.

Mr. RALSTON. The printer can speak for himself, and I think he ought to speak under oath.

Mr. RALPH. I think he will do it.

Mr. RALSTON. I think he ought to rather than have that statement read.

Mr. RALPH. I think it would be a good idea to have everybody put under oath.

Mr. RALSTON. That is my suggestion, making an exception in Mr. Ralph's case.

Mr. RALPH. If there is any hesitancy on the part of the committee, I shall ask the gentleman to subscribe to that.

Mr. RALSTON. Well, I wish to object to that. I want the gentleman here. This appears to be a statement by question and answer propounded by Mr. Ralph and somebody else. I think the questions and answers ought to be propounded in the presence of the committee.

Senator SMOOT. Will you withdraw that, Mr. Ralph, and we will have Mr. Poole before the committee, and he can make whatever statement he desires.

Mr. Ralston, the Senate has passed no resolution authorizing the Senate Committee on Printing to administer oaths. It is not because we would not want to comply with your request in this matter, but we have no authority to do it.

Mr. RALSTON. Then, Mr. Chairman, if you will pardon the suggestion, may I suggest to the committee the advisability of this com-

mittee having power to send for witnesses and to administer oaths? There are some witnesses that we may desire to introduce and we may not have power to cause their appearance here.

Senator SMOOT. We can have a resolution passed if it becomes necessary.

Senator PAGE. Mr. Ralston, do you think there is much danger in the presence of this committee here in allowing them to consider this statement?

Mr. RALSTON. Yes, Senator, if you will allow me. I know nothing of the statements of course, but I do notice at a glance that it is a series of questions and answers which it is desired to put in as the testimony of Mr. Poole. I think Mr. Poole ought to be here. I think we should be able to examine and cross-examine him.

Senator PAGE. I do not think the committee ought to be considered as an ordinary jury. We can take that, and I would like to hear it, because it lays the foundation for what is to follow. If afterwards you find that it is untrue, you may show it. It seems to me it would be wise to have that read now for the benefit of all parties.

Mr. RALSTON. Of course, you gentlemen will receive the statement, for what it is worth.

Mr. RALPH. It will be corroborated by three other gentlemen of unimpeachable integrity, I think.

Senator KENYON. It could be read and not treated as testimony.

Senator SMOOT. Would you have any objection to simply reading it into the record?

Mr. RALSTON. I could not have any objection, but I think we ought to have the man here so he can be subject to question and answer in the presence of the committee.

Senator SMOOT. We expect to have the gentleman here, if you desire him to come. The committee think Mr. Ralph could read the statement so as to lay a basis for what he desires to say, but not as testimony, just as information.

Senator GALLINGER. Is Mr. Poole in the city?

Mr. RALPH. Yes; Mr. Poole is in the city, Senator. I do not think the gentleman would refuse to come up here and make any statement.

Mr. RALSTON. Mr. Ralph's statement, I am sure, will give the impression—will give the committee a very good idea of what the contest is about without being supplemented by this document.

Senator KENYON. You are not, as I understand it, putting this in as evidence.

Mr. RALPH. It is immaterial to me whether you consider it as evidence; I want to establish the fact—

The CHAIRMAN. It is just a part of your statement.

Mr. RALPH. I want to establish the fact that this gentleman, without any preparation, printed these notes on the power press, and he exercised his own skill and judgment about the manipulation of the press in the printing of this sheet, so the work was not favored in any way.

Senator GALLINGER. Isn't it sufficient for your purpose, Mr. Ralph, in making your statement, to simply leave it there?

Mr. RALPH. Yes, sir; I am satisfied, Senator.

If the backs of United States and national-bank notes were printed on the face four-subject on power presses, the savings would be \$648,970 a year after all that work has been transferred to power presses.



Senator SMOOT. Upon the basis of the issue of to-day?

Mr. RALPH. Upon the basis of the estimated quantity required for the fiscal year 1913.

Senator GALLINGER. That is, provided they were all printed on power presses, is that right?

Mr. RALPH. Wait, Senator; I think I am wrong about that. I want to qualify that. If the backs of United States and national-bank notes were printed eight-subject on power presses, and the faces four-subject on hand presses, the economy would be \$648,970. If the backs of United States and national-bank notes were printed four-subject on power presses and the faces four-subject on hand presses, the saving would be \$460,320.

Senator GALLINGER. Well, Mr. Ralph, I know a little something about printing, but I know nothing whatever about engraving. Will you explain what you mean by eight-subject?

Mr. RALPH. We now print four subjects on a sheet.

Senator GALLINGER. I understand.

Mr. RALPH. It is possible to print eight subjects on a sheet like that [producing a sheet of eight \$1 notes].

Senator GALLINGER. At this point, Mr. Ralph—and I hesitate to interrupt you; perhaps I had better not?

Mr. RALPH. All right, Senator.

Senator GALLINGER. At this point, what saving, approximately, would there be if 20 per cent of the notes were printed on power presses as is contemplated in the amendment to the law?

Mr. RALPH. One-fifth of the sum total.

Senator GALLINGER. One-fifth of that amount?

Mr. RALPH. Yes, sir.

Senator GALLINGER. About \$80,000, or something like that?

Mr. RALPH. If we take the factor of four subjects, that will be about \$80,000—on the four subjects.

Senator GALLINGER. One other point. Can you print eight subjects, as you call it, as readily as four?

Mr. RALPH. Yes. We could not do that and adhere to the provision in the Smoot bill, to take care of all of the employees, unless we reduced the percentage of power presses introduced. We could put the eight-subject backs on the power presses and print the faces four-subject on the hand presses and absorb all the backs within 18 months without discharging any good or efficient employee who is now on the rolls, thereby saving much more. I would have some difficulty if we put the face work four-subjects on the power presses, backs and faces.

Senator GALLINGER. Mr. Ralph, about this saving, it occurs to me that it must be for the reason that your present force is not adequate to print what the Government demands?

Mr. RALPH. My present force is not adequate to print what we provided for in this fiscal year.

Senator GALLINGER. You make no saving in labor?

Mr. RALPH. It has taken the course of an increased quantity of work. The urgent deficiency bill provided for 10,000,000 sheets. Our estimated quantity this year under the appropriations provided for 70,000,000 sheets. I am working the men one hour overtime, which is equivalent to 60 men. I have appointed some 60 or 65 men on the temporary rolls.

Senator PAGE. What per cent of your men naturally go out in each year from deaths, inefficiency, or for other reasons?

Mr. RALPH. I will come to that, Senator, in the next paragraph. I want to explain wherein the force is inadequate. I have appointed some 60 men on the temporary rolls. My reasons for appointing men on the temporary rolls were that I am sincere in qualifying on the Smoot provision, that no good or efficient men shall be discharged, and until it is ascertained whether or not Congress will take some action on this power-press matter—if I knew there would not be any legislation, I would appoint all these men permanently. But as it is, in my mind, I think it would be a great injustice to bring men here under the assumption that they would have permanent work, and then by means of legislation displace a number of men after they had given up their permanent positions.

On January 11, 1911, when Senator Smoot made his proposition to the plate printers, we had 786 printers on the rolls. From January 11, 1911, to January 27, 1912, I appointed 114, making a total of 900. Less number separated from the service on account of resignations, deaths, and discharges, January 11, 1911, to January 27, 1912, 67.

Senator PAGE. Fifty-seven more came in than went out, then?

Mr. RALPH. Yes, sir. Regular printers on rolls, January 27, 1912, 833. Temporary printers on rolls, January 27, 1912, 47. Total number on rolls, January 27, 1912, 880. Number on civil-service list, 1912, eligible for certification, 22.

Senator GALLINGER. Who makes the examinations for the civil-service list?

Mr. RALPH. There is no educational test. It is a certification of service and experience. The number available are less than the requirements for 1913 by 65 printers. I do not think of anything else, sir.

Senator SMOOT. In connection with that, I wish to say that I have received many petitions such as this:

NEW ORLEANS CLEARING HOUSE ASSOCIATION,  
*New Orleans, La., January 19, 1912.*

Senator REED SMOOT,  
*Washington, D. C.*

SIR: The banks of this association desire to urge upon all members of the Appropriations Committees of Congress that the entire estimate of appropriations required for the Bureau of Engraving and Printing for the fiscal year ending June 30, 1913, be made in accordance with the estimate of the Secretary of the Treasury.

The demand for new and clean currency is increasing year after year, and the supply here, especially at certain seasons of the year, has been more or less restricted.

The members of this association simply desire to impress upon the members of the committees referred to the urgency of this matter.

Respectfully,

C. A. MORGAN, *Manager.*

Senator GALLINGER. Is this increased demand, Mr. Ralph, largely for the smaller denominations?

Mr. RALPH. The increased demand has been largely for small denominations, Senator.

Senator GALLINGER. I take it that the per capita circulation has not greatly increased.

Mr. RALPH. I think the Treasury has not issued very much free gold in the last year or two, but there has been a constant demand for one and two dollar bills, and as they retired the larger denominations of course they issued corresponding small bills to take the place of them. As a result the volume of one and two dollar bills has

been largely increased, and as the life of one and two dollar bills is much shorter—

Senator GALLINGER. Is there a great demand the country over for cleaner money?

Mr. RALPH. There is a great demand for cleaner money.

Senator SMOOT. In our State and in other Western States we have nothing but old, dirty money that is almost a disgrace for the people to handle. I hope to see the time when we will be furnished with clean money out there.

Mr. RALPH. I want to state that I have about reached the limitations of the capacity of the Bureau of Engraving and Printing. To-night we have 211 printers at work on the night force. We have not any additional space. We can not expand on the day force, and any increased work that we now do must necessarily be in expanding the hours of the day force. In the event there is no relief I shall be compelled to ask Congress in the general deficiency bill for authority to rent buildings somewhere; otherwise I can not meet the requirements.

Senator SMOOT. Mr. Ralph, do you think the currency printed upon the power press would be easier to counterfeit than that printed by hand press?

Mr. RALPH. No, sir; I do not.

Senator SMOOT. Do you think there is any person can tell the difference, whether it is printed upon the hand press or the power press?

Mr. RALPH. Absolutely not.

Senator KENYON. Mr. Chairman, I would like to suggest a statement of the objections. I am not clear as to the objections that have been raised.

Senator SMOOT. I suppose the representatives of the plate printers' union will state that in their testimony.

Senator GALLINGER. Has the Secret Service—which used to have jurisdiction, and it has now, over the matter of looking after counterfeiters—been consulted, Mr. Ralph?

Mr. RALPH. Consulted? Not to my knowledge.

Senator GALLINGER. The Secretary of the Treasury, I understand, has.

Mr. RALPH. It is such a momentous question that I hesitate to express an opinion, because we endanger friendships and hazard the dislike of men who once were our friends.

Senator GALLINGER. Well, the Secret Service would not have any reason to get frightened at the breaking of friendships.

Mr. RALPH. I don't know. I can not speak for them. I suggest you call upon Mr. Wilkie.

Senator SMOOT. Mr. Ralph, the Senator asks you if the Secretary of the Treasury has been spoken to or whether he was in sympathy with this part of the currency being printed by power presses.

Mr. RALPH. Absolutely. The Secretary of the Treasury is in thorough sympathy with it, with the proviso that no men shall lose their positions through the introduction of power presses.

Senator GALLINGER. Mr. Ralston, why not give us the benefit of your views now? We do not want to waste time.

Mr. RALSTON. I shall be very glad to do so, except that I may want to supplement them later.

Senator GALLINGER. We will give you a chance to supplement them.

Mr. RALSTON. While I feel somewhat familiar with this general subject, because it was my fortune to take a very active part in the examination before the committee consisting of Mr. Harris and Mr. Hiscock—that was 20 years ago, and I have had time to become rather rusty on the matter. There have been some changes in the situation since that time. In addition, these gentlemen only spoke to me Saturday afternoon at all about appearing before the committee and I have not had time to make that preparation to appear before this committee that I feel would be proper.

Senator SMOOT. If that is the case, as far as the committee is concerned if you are not prepared to make a statement now upon this you can have time to prepare your statement. You need not keep us here on that matter, but just continue with your cross-questioning of Mr. Ralph.

Mr. RALSTON. The matter is of the highest public importance, from our standpoint. Mr. Ralph, you print the revenue stamps on the power presses, do you not?

Mr. RALPH. Yes, sir.

Mr. RALSTON. And have done so for a long time?

Mr. RALPH. We have as an entirety for about a year and a half, I should say.

Mr. RALSTON. In part?

Mr. RALPH. We commenced in part three years ago.

Mr. RALSTON. And prior to that time they were printed on hand presses?

Mr. RALPH. Yes, sir.

Mr. RALSTON. Have you changed the engraving since you put the revenue stamps on the power presses?

Mr. RALPH. We have made new designs.

Mr. RALSTON. You have made new designs. Have you changed the character of those designs?

Mr. RALPH. Not with the intent of printing on power presses. We have some of the engravings on hand that were used on the old designs.

Mr. RALSTON. Yes. Is it not true that you have done away with many of the fine lines that were there before, in the engraving?

Mr. RALPH. I do not think so.

Mr. RALSTON. You have deepened the lines, have you not?

Mr. RALPH. I could not speak as to that. You would have to take the engraver who made it. I doubt whether the lines were strengthened to any extent.

Senator CHILTON. How do you mean deepen the lines; deepen the cut in the face?

Mr. RALPH. Yes.

Senator CHILTON. That would broaden them as well?

Mr. RALSTON. It would do both. You have broadened them as well, haven't you?

Mr. RALPH. I could not answer as to that, because I have not any knowledge that the lines have been deepened. The engravers could testify as to that better than I.

Mr. RALSTON. Don't you know that the engraving used to-day in the revenue stamps is not of as high character as it was previously?

Mr. RALPH. I do not think so.

Mr. RALSTON. It is not the same engraving, is it?

Mr. RALPH. It is not the same design. We could not possibly use the same old design. I changed the design of the postage stamps, and I did not eliminate any fine lines on a postage stamp. The deep cutting has been done more accurately, with greater precision, and I have a flat level surface for making a transfer, and as a consequence we are getting more impressions from our plates, but the quality of the engraving is equal to that which we formerly used.

Mr. RALSTON. Now, I refer you to the report of this committee on page 54.

Mr. RALPH. I am familiar with that.

Mr. RALSTON. And your letter thereon. You say:

But this can be overcome by engraving the lines of the design of faceplates to a greater depth and width, so as to increase the life of the plate.

Mr. RALPH. Will you read the preceding sentence, Mr. Ralston?

Mr. RALSTON. I will read the whole:

The excellent results obtained, however, under these unfavorable conditions clearly show that it will be practicable to print faces in a perfectly satisfactory manner, with a single exception—that it is possible that the plates will show greater wear on the power press than on the hand-roller press, which would necessarily shorten the life of the plate; but this can be overcome by engraving the lines of the design of faceplates to a greater depth and width, so as to increase the life of the plate.

Now, tell me, will or will not the deepening and broadening of those lines operate to produce a coarser result?

Mr. RALPH. Well, it depends upon what you mean by "coarser." It will be a lighter engraving. The closer the lines the darker your engraving is. Since you have read that I will say I incorporated that, gentlemen, out of my friendship for the plate printers' union. I did not want faces to go on the power presses, but since we printed the faces as an exhibit and have taken the judgment of expert qualified plate printers, it is the judgment of them that the plates will wear equally as long if not longer on the power presses. The life of the plate will be equal.

Senator SMOOT. How many impressions do you have on a hand press?

Mr. RALPH. It varies from 40,000 to 70,000. On the backs we frequently get 110,000, but the faces run anywhere from 35,000 to 70,000.

Senator SMOOT. Do you remember what George P. Foster's estimate was of the number of impressions on a power press?

Mr. RALPH. I do not know.

Senator SMOOT. As I remember—I do not give this as testimony, because I do not positively remember—I understood that he said that on the backs on the hand press the impressions would be nearly 130,000, and upon the power press 80,000 would be all they could run until it would show wear and perhaps not be as good.

Mr. RALPH. The best he could do would be to make a guess.

Senator SMOOT. True; he said that was a guess, but in his opinion there would be that difference, and it was only a question of the cost of more plates. But he said that the power press would not print as many impressions as the hand press.

Mr. RALSTON. When you make an engraving, Mr. Ralph, some of these lines barely enter the face of the surface of the engraved plate;

isn't that true? In such an engraving, let us say, as this face [indicating the sheet of \$1 notes], some of the lines barely enter.

Mr. RALPH. There is not a line on that plate, Mr. Ralston, beyond one-thousandth of an inch in depth.

Mr. RALSTON. Even the deepest?

Mr. RALPH. The deepest.

Mr. RALSTON. And many of them are much less than that?

Mr. RALPH. Many of them are much less; yes, sir.

Mr. RALSTON. Then, with the wearing of the plate the lines of lesser depth become practically extinct?

Mr. RALPH. The depth would not have anything to do with it. Where you put two lines close together like that [indicating] it must necessarily have knife edge. If you widen the spaces between the lines you get a solid piece of steel like that. Where the lines are very close together they have a knife edge that will show wear, but it will never wear down to the bottom of the line.

Senator CHILTON. It is not the hole; it is the ridge that wears?

Mr. RALPH. It is the surface contact in wiping with the hand, and the pressure.

Mr. RALSTON. Now, your purpose in writing this letter, your prime purpose, was to give the committee the fullest information, the most exact information——

Mr. RALPH. With the least injury to the trade.

Mr. RALSTON. What was the reason for your hesitancy in putting the faces on the power presses—the hesitancy you mentioned in this letter?

Mr. RALPH. My real reason was my friendship for the trade, inasmuch as the faces are the best paid work——

Mr. RALSTON. Of course, your first duty was to the Government, and that being true, why would you not as soon put the faces——

Mr. RALPH. I would now, just as soon.

Mr. RALSTON. The backs were at one time put upon power presses, were they not?

Mr. RALPH. Yes, sir.

Mr. RALSTON. How long ago was that?

Mr. RALPH. I should judge that was 1894, 1896, or 1897.

Mr. RALSTON. It was earlier than that; in the eighties?

Mr. RALPH. No; the backs were printed—it was in 1895 or 1896.

Mr. RALSTON. Do you remember that the newspapers—special newspapers, such as the Counterfeit Detector—protested at that time against the condition of the currency which was printed? I refer specifically to the printing of the silver certificates.

Mr. RALPH. The backs?

Mr. RALSTON. Yes, sir.

Mr. RALPH. Nobody protested more than I did against printing them on power presses at that time, and nobody contributed more than I did to having them taken off there.

Mr. RALSTON. Why?

Mr. RALPH. Out of friendship for the men; because I knew there was a man at the head of the bureau at that time who would unhesitatingly have discharged the men and displaced them.

Mr. RALSTON. I am going back to a period before the examination of 1889. Prior to that——

Mr. RALPH. I was not in the employ of the bureau prior to that.

Mr. RALSTON. You know nothing, then, of the actions of the counterfeit detectors and their papers with regard to that side?

Mr. RALPH. No, sir.

Mr. RALSTON. This is true, at any rate, is it not, that in order to put the currency upon the power press the engraving would have to be changed?

Mr. RALPH. No, sir.

Mr. RALSTON. Isn't that the inference from your letter here?

Mr. RALPH. No, sir. I am testifying now irrespective of my letter. I previously told you that I hesitated about writing a letter. If the conditions were the same to-day——

Mr. RALSTON. You spoke about the design for engraving having to be changed and given greater breadth and depth of line.

Mr. RALPH. After I saw the results we obtained on printing that one dollar silver certificate I have no hesitancy in stating that the work is equal in every respect to the handwork.

Mr. RALSTON. May I ask, are you a practical plate printer?

Mr. RALPH. No, sir; not in the sense that you would call practical.

Mr. RALSTON. Or a practical engraver or transferrer?

Mr. RALPH. No, sir.

Mr. RALSTON. Or a practical photographer?

Mr. RALPH. No, sir; I could not qualify as having served an apprenticeship, but I think my experience is worth something.

Mr. RALSTON. You have spoken of your ability to make this transfer to the power presses without discharging good or efficient employees?

Mr. RALPH. Yes, sir.

Mr. RALSTON. Would you have the committee infer from that that your employees are not good and efficient?

Mr. RALPH. I should say that out of the total of 880 there are probably not more than 20 inefficient men. I am employing men that I have discharged five or six times, but it is because of the shortage of men.

Mr. RALSTON. You have produced a letter here from Mr. Andrews. Did you have a talk with Mr. Andrews before he wrote you that letter?

Mr. RALPH. Over the phone; yes, sir.

Mr. RALSTON. Who suggested its being written?

Mr. RALPH. I do not recall that there was any suggestion, but I did question the legality of printing that on the power presses, and as a matter of record the Secretary unhesitatingly wrote that letter.

Mr. RALSTON. You do not know whether you suggested it or he?

Mr. RALPH. I do not know that I did; perhaps I did.

Mr. RALSTON. Now, you consider the notes at present superior to those of any other country, do you not?

Mr. RALPH. Yes, sir.

Mr. RALSTON. Do you think they are superior to the Canadian?

Mr. RALPH. Far superior; yes, sir.

Mr. RALSTON. Why?

Mr. RALPH. Because they are better printed and better designed.

Mr. RALSTON. The Canadian are printed on power presses and yours are printed on hand presses?

Mr. RALPH. Yes, sir.

Mr. RALSTON. You think that has nothing to do with their superiority?

Mr. RALPH. I do not think there should be any comparison.

Mr. RALSTON. Why not?

Mr. RALPH. Because the weak lines and engravings of the Canadian notes and the character of the ink they use do not give the color strength.

Mr. RALSTON. You spoke of ours as being better printed.

Mr. RALPH. Yes, sir; I speak now of either hand or power press.

Mr. RALSTON. The Canadian's are printed on hand presses, are they not?

Mr. RALPH. Power presses.

Mr. RALSTON. Power presses, I mean.

Mr. RALPH. Power presses; yes, sir.

Mr. RALSTON. I think the committee might be interested in looking at the Canadian issues [handing specimens to the members of the committee].

Senator SMOOT. Perhaps it would be better to have the American notes printed on power presses compared with the Canadian notes printed on power presses.

Mr. RALPH. I wanted it to go in the record that the power presses used by the Canadians are not the same presses.

Mr. RALSTON. What is the difference?

Mr. RALPH. Quite a number of differences; probably 10 or 12 different principles.

Mr. RALSTON. Wouldn't you, as one familiar with the matter, say that those notes [indicating the Canadian notes] have a flat appearance?

Mr. RALPH. Unqualifiedly. I would never stand responsible for the issuing of such notes for the United States Government.

Mr. RALSTON. Won't you explain to the committee what is meant by that term "flat"?

Mr. RALPH. There is no life to the note, they have no strength of color, and their ink is very bad.

Mr. RALSTON. Now, is the flat appearance due to the lack of embossing?

Mr. RALPH. Absolutely not.

Mr. RALSTON. Not due to the lack of embossing?

Mr. RALPH. No, sir.

Mr. RALSTON. There is no embossing effect there [indicating the Canadian note], is there?

Mr. RALPH. No, sir; and there is no embossing effect on ours, because we roll the embossing effect out after we finish the note. We have the color strength.

Mr. RALSTON. You think you can roll the embossed appearance out?

Mr. RALPH. Oh, yes. I would like to show to the committee what Mr. Ralston means by the embossing effect. This [exhibiting a slip of paper] has been run over a plate without any ink on it. You will see that it is embossed; the lines of the engraving are raised on that.

Mr. RALSTON. Mr. Ralph, I do not know how far the committee is familiar with the general process of engraving and printing from engraved plates. I wish you would explain that to the committee.

Mr. RALPH. I should be glad to if the committee wants to be enlightened on that. Some of them visited the bureau the other day and saw for themselves.

Senator SMOOT. I think we all did.



Mr. RALSTON. I would like to have him make a short statement as preliminary to some questions I will ask. How is plate printing done, in other words?

Mr. RALPH. Here is an ordinary card plate. The lines are engraved below the surface, intaglio. The printer fills in those lines with ink by rolling the ink in. Here [producing a number of photographs] is a printer filling in his plate with a roller. Here the same printer is wiping the surplus ink off the level of the surface of the plate with a rag. Now he is polishing the plate with his left hand there.

Senator GALLINGER. Using what substance?

Mr. RALPH. He coats the palm of his hand with whiting, so it takes off all the surplus ink. Then the sheet of paper is placed upon the plate, and it is run through the press, and the pressure of the roller through the soft blankets forces the paper down through the engraved lines, lifts the ink out, and the ink stands in relief upon the surface of the paper.

Mr. RALSTON. Now, will you explain just how it is done on the power press?

Mr. RALPH. Yes, sir; you use exactly the same principle. Most of the committee witnessed it for themselves. This is a power press [exhibiting a photograph]. Here is the roller inking in the plate, covering the surface of the plate, and filling the engraved intaglio lines full of ink. It passes on to this wiper, which takes the surface ink off the plate. It is the same process which the printer uses in taking the rag. Then it comes through here, and the printer has absolute control of the process. He can regulate the wiper—the pressure on the roller. He polishes the plate with his hand, the same as with the hand press. A girl lays a sheet upon the press and it goes under the roll.

Mr. RALSTON. Now, will you indicate on this photograph the wiper?

Mr. RALPH. Yes, sir; this is the wiper—this whole thing [indicating].

Mr. RALSTON. Will you explain how that wiper operates?

Mr. RALPH. That wiper has an oscillating movement like this [indicating]. The rag is operated by a cam.

Senator CHILTON. Rotary or oscillating?

Mr. RALPH. Oscillating. It takes the surplus ink off.

Mr. RALSTON. What pressure to the square inch is brought to bear?

Mr. RALPH. I have no idea. It can be regulated by the printer. It is no more than necessary to take the ink off.

Mr. RALSTON. How about the wiping? Does the printer exercise any judgment in wiping a plate?

Mr. RALPH. He exercises the same judgment on a power press as he would on a hand press.

Mr. RALSTON. Can he exercise the same judgment?

Mr. RALPH. Absolutely.

Mr. RALSTON. The wiper is set to operate in a fixed manner?

Mr. RALPH. Yes; but he can adjust that. If it wipes too close, he can let it up. He has absolute control of it.

Mr. RALSTON. Could a printer in wiping a plate wipe deeply, so to speak, or hard on some points and lightly in others?

Mr. RALPH. I have never seen any printers doing it when I observed them.

Mr. RALSTON. The printer can wipe across the lines, can he not?

Mr. RALPH. The printer can wipe any way he wants to, but as a rule they go at it with both hands.

Mr. RALSTON. He can wipe any way he wants to, but can the power press do that?

Mr. RALPH. The power-press printer, with his hands, can polish anywhere; yes, sir.

Mr. RALSTON. Can the wiper be operated any way to get good results?

Mr. RALPH. The printer has a privilege—and they utilize it in outside establishments, such as the American Bank Note Co. The printer polishes with his hand, and with the rag, too. And if it was necessary to do that in the Bureau of Engraving and Printing he could exercise that discretion there.

Mr. RALSTON. Those presses operate faster, without any machine at all—the American Bank Note Co.?

Mr. RALPH. No, sir; about as fast as ours.

Mr. RALSTON. The American Bank Note Co. will turn out as much as these presses?

Mr. RALPH. No, sir; they do not turn out as much as ours, but they work on about the same principle.

Mr. RALSTON. Isn't it a fact that the printer in the American Bank Note Co. exercises discretion in his wiping, whereas with that none can be exercised?

Mr. RALPH. I do not think so.

Mr. RALSTON. You say that the printer can exercise discretion about that—you do not say they do it?

Mr. RALPH. You are speaking about hand presses?

Mr. RALSTON. Yes, sir.

Mr. RALPH. Yes.

Mr. RALSTON. What would be the purpose of his exercising discretion?

Mr. RALPH. Why, to get quality of work.

Mr. RALSTON. Can the man who is running a plate of that kind through a power press exercise the same discretion as a printer on the hand press?

Mr. RALPH. In what respect?

Mr. RALSTON. As to the wiping?

Mr. RALPH. Yes; I should say he can take a rag in one hand and wipe it afterwards.

Mr. RALSTON. But the machine is going—

Mr. RALPH. We do not find it necessary to do that in the bureau.

Mr. RALSTON. But the plate is going to and fro all the time?

Mr. RALPH. Coming toward him.

Mr. RALSTON. So the plate is in motion? And it is only a chance whether he exercises or can exercise that discretion?

Mr. RALPH. If he has not time, he can stop the press, and I have seen them do it.

Mr. RALSTON. You saw them stop the press? Wasn't that because the press was not wiping properly?

Mr. RALPH. Because the wiper did not wipe off all the ink.

Mr. RALSTON. So the printer can at times correct the errors?

Mr. RALPH. Absolutely; the printer has absolute control of that press.

Mr. RALSTON. Then the mechanical wiper is beyond the complete control of the printer?

Mr. RALPH. Beyond complete control? In what respect?

Mr. RALSTON. In other words, the defects that are committed by the wiper, the printer corrects?

Mr. RALPH. If the mechanical wiper takes too much ink out of the lines, he can raise it.

Mr. RALSTON. As a matter of fact, with a press running 5,000 impressions a day, what time would he have to correct?

Mr. RALPH. We do not have any press running 5,000; 4,500 is a maximum.

Mr. RALSTON. Well, say, 4,000. What time will he have to correct the errors?

Mr. RALPH. Ample time.

Mr. RALSTON. With the press in motion all the while?

Mr. RALPH. Yes, sir; I have seen them in a day's work lose an hour's time. I venture to say the printer could easily run 5,500 if he tried.

Mr. RALSTON. Isn't it a fact that with the power press all the printer can undertake to do will be to correct those impressions where the plate has been left in the worst possible manner from the power press?

Mr. RALPH. I do not quite catch that.

Mr. RALSTON. As a matter of fact, isn't all that a printer can do with a power press simply occasionally to correct a few of the worst impressions. I mean of the plates that are in the worst condition?

Mr. RALPH. I do not think a printer with the power press would have any trouble rectifying any fault of the wiper or any other part of the machine.

Mr. RALSTON. Will you say that the work done on the power press on the revenue stamps is equal to average work on the same plates under like circumstances, all hand printing?

Mr. RALPH. Absolutely. We have an expert printer who is superintendent of printing. In all of our divisions we have expert printers acting as foremen, men who have worked at it for years and no doubt are competent and better qualified to answer those questions than myself, Mr. Chairman.

Mr. RALSTON. You have explained to the committee, I think, that the ordinary plate has these four parts.

Mr. RALPH. Four subjects.

Mr. RALSTON. Four subjects, as you term them.

Mr. RALPH. Yes.

Mr. RALSTON. Is it not the duty of the printer, when he is printing such a plate, to go over the plate with his wiper in such a manner as far as possible to cross the general way in which the lines run?

Mr. RALPH. No, sir.

Mr. RALSTON. If he does not do that he digs the ink out of the lines, does he not?

Mr. RALPH. I have noticed, many, many, many printers that wipe the plate up and down, do not cross the plate at all.

Mr. RALSTON. I mean across the general course.

Mr. RALPH. There is not any way the printer could wipe his plate but what he would cross some of the lines, go across them and go lengthwise.

Mr. RALSTON. Is it not the place of the printer to humor, as it were, the fine lines and to take more of the ink off the heavy ones?

Mr. RALPH. It is the duty of the printer to get results on that plate in the best possible workmanlike manner, irrespective of how he does it. There is not any fixed principle laid down as to how a printer shall wipe, or how often he shall wipe, or in what way he shall wipe, but they all seem to get results.

Mr. RALSTON. Is there any fixed rule by which this mechanical wiper shall wipe so as to get results?

Mr. RALPH. That is fixed; it is limited to the oscillating movements of the machine. The result is the best evidence; the theoretical reasoning would not give any results.

Mr. RALSTON. Yes; and you can not as to that speak as an expert, as I understand it?

Mr. RALPH. No; I can not qualify as an expert.

Mr. RALSTON. You, I think, have said sufficiently to the committee that you do not qualify as an expert at all, and therefore when you present these specimens and other specimens as good work and as good as may be done by hand, do you speak as an expert or not?

Mr. RALPH. I speak as to the qualifications of the average printer in the Bureau of Engraving and Printing. We have men coming into the Bureau of Engraving and Printing as printers who have had no experience whatever.

Mr. RALSTON. That is not what my question contemplated.

Mr. RALPH. What is that?

Senator SMOOT. Mr. Ralston wants to know your qualifications to speak to this committee?

Mr. RALPH. I will speak as having such qualifications as the average printer in the Bureau of Engraving and Printing who has had no experience in printing bank notes, who has been two or three years printing card plates, and who comes in and we have to teach him the business in the Bureau of Engraving and Printing.

Mr. RALSTON. That was not quite my question. I asked of you whether in telling the committee that this printing that you have introduced as done by power presses is equal to hand-press printing; whether in making this statement you speak as an expert or not?

Mr. RALPH. I speak as a man who has had 18 years' experience in the bank-note business, both in the engraving department and in the administrative department.

Mr. RALSTON. Not as an expert plate printer or expert engraver?

Mr. RALPH. Not as an expert plate printer or expert engraver.

Mr. RALSTON. I think that is all.

Mr. RALPH. I would like Mr. McKinney to take the stand.

Senator CHILTON. Is the plate—I am saying this for the benefit of the committee—for the handwork and the presswork the same?

Mr. RALPH. We can use the same plate, but ordinarily for the power press we use a thicker plate.

Senator CHILTON. How is it as to the engraving?

Mr. RALPH. The engraving can be identically the same, and the engraving with which we printed the exhibits which Senator Smoot has there are identically the same.

Senator CHILTON. You refer in your testimony to some photographs exhibited to the committee.

Mr. RALPH. Yes, sir.

Senator CHILTON. Will you file those and mark on each one of them the different processes used?

Mr. RALPH. Yes, sir; I think they are labeled.

Senator CHILTON. If not, you can do it?

Mr. RALPH. Yes, sir.

Senator CHILTON. Please do that, then, in order to get them in the record properly.

Senator SMOOT. I would also like to offer as exhibits certain bank notes, postal-savings cards, revenue stamps, taken part of them from stock, part of them printed from power presses, and part upon hand presses, so that any member of the committee can see the result.

Senator CHILTON. Have Mr. Ralph mark them and identify them.

Senator SMOOT. There is a key right here.

Mr. RALPH. I have not the key and I could not do it.

Senator SMOOT. I have the key here, and that will be a part of the record.

Senator CHILTON. At the same time you had better ask him about the key, so that it will be in the record so that you can identify it.

Senator SMOOT. Mr. Ralph, on this \$1 currency, is that the key that was made out?

Mr. RALPH. That was marked by Mr. Ferguson; he can identify them. I have never seen the marks on them.

Senator CHILTON. Is Mr. Ferguson the assistant director?

Mr. RALPH. Yes, sir; he can identify them.

Senator SMOOT (to Mr. Ferguson). Did you make out that key?

Mr. FERGUSON. Yes, sir.

Senator SMOOT. And that data refers to the money that was printed upon the power press and the hand press and that taken from stock?

Mr. FERGUSON. Yes, sir; five notes each.

Senator SMOOT. And the same plan was adopted in relation to the postal-savings cards and also to the revenue stamps?

Mr. FERGUSON. Yes, sir.

Senator CHILTON. Mr. Ralph, you spoke of employing people without experience. Is that quite a general custom to take in persons who have not had experience?

Mr. RALPH. As a matter of fact, they have worked in the different departments printing cards, wedding invitations, and so forth; but they have not had experience in bank-note printing. They are better qualified than a man who has had no experience, but they know nothing about the bank-note business until they come in the bureau, and they practically have to learn the bank-note business.

Senator CHILTON. What is the technical knowledge that a plate printer has to have?

Mr. RALPH. I could not answer that question, although I have had considerable experience in analyzing the qualifications of a great many plate printers.

Senator CHILTON. Does he have anything else to do but ink the plate and then make the impression?

Mr. RALPH. I will cite a case of a man who came in the bureau and who had never worked a day at the business.

Senator CHILTON. I want it in the record.

Mr. RALPH. I offer it in the record.

Senator CHILTON. You see, what we talk about here informally does not get in the printed record which goes to the other Senators. I want to know whether the plate printers have anything to do but ink the plate, wipe it properly, and make the impression?

Senator SMOOT. Polish it?

Mr. RALPH. That is the physical labor of it. A man should be competent to judge whether he has the full impression of the plate.

Senator CHILTON. That is what I want to know.

Mr. RALPH. And the amount of pressure which is necessary to carry and the adjustments of his blankets are the technical features.

Senator SMOOT. Technical features for power presses and hand presses?

Senator CHILTON. That is what I wanted to get.

Senator SMOOT. Mr. Ralston, is there anything further that you would like to ask Mr. Ralph?

Mr. RALSTON. I have nothing further to ask.

Senator SMOOT. That is all, Mr. Ralph. Do you wish to file that statement which you have there?

Senator CHILTON. The statement you said you wanted to file.

Mr. RALPH. Yes, sir.

Senator SMOOT. Make that a part of the record, then. I do not know what it is.

Senator GALLINGER. Is that a statement, Mr. Ralph, which you formulated?

Mr. RALPH. That is a statement copied from the records of the Bureau of Engraving and Printing.

Mr. RALSTON. In relation to what?

Mr. RALPH. In relation to a plate printer and other plate printers.

Mr. RALSTON. I do not know what may be in it.

Senator GALLINGER. I do not either. If it is simply a copy of the record, then we can not object to it.

Mr. RALSTON. I may want to ask some questions about it.

Senator GALLINGER. I suppose if you desire it Mr. Ralph will allow you to examine it.

Mr. RALPH. Absolutely.

The statement submitted by Mr. Ralph is as follows:

JANUARY 26, 1912.

HARRY W. BATES.

Mr. Bates was certified as eligible by the Civil Service Commission on June 6, 1900, with the average rating of 76.60.

On June 11, 1900, he was appointed a plate printer in this bureau at established piece rates.

On June 19, 1900, he reported and was assigned to duty as a plate printer in this bureau.

On November 2, 1900, the then director of the bureau addressed the following letter to the Secretary of the Treasury:

"I have the honor to report that Harry W. Bates, a plate printer in this bureau, was recently arrested and charged before the United States commissioner in this city with forgery in connection with the application filed by him before the United States Civil Service Commission for examination as a plate printer, and I am informed that the case has been referred to the grand jury, thus showing that there is a *prima facie* ground for the charges made against Mr. Bates. In view of this, I have the honor to recommend that pending action in this case before the courts, Mr. Bates be suspended from duty."

In accordance with the recommendation contained in the above letter, on November 3, 1900, Mr. Bates was suspended from duty pending the action of the grand jury upon the charge of forgery preferred against him in connection with his application papers.

On November 15, 1900, the committee of the bureau to rate probationers reported that Mr. Bates be not permanently appointed for the reason that it did not appear that he had learned the business of plate printing, and recommendation was made to the Secretary of the Treasury in accordance with the report of the committee.

On November 18, 1900, the services of Mr. Bates were dispensed with.

Appended below is a statement of Mr. Bates's work record showing the amount of work performed, the number of sheets spoiled in excess of the allowance, the amount he paid for spoilage in excess of the allowance, and his net earnings:

Date.	Impres- sions paid for.	Sheets spoiled in excess of allowance.	Amount paid for excessive spoilage.	Net earn- ings.
1900.				
June.....	3,400	159	\$2.60	\$12.85
July.....	11,090	59	.95	55.65
August.....	16,604	91	1.45	85.45
September.....	15,894			94.05
October.....	19,390	29	.45	125.30
November.....				4.65
December.....				
Total.....	66,378	338	5.45	377.95

In comparison with the above record of Harry W. Bates are the following work records of plate printers who were certified by the Civil Service Commission as having served an apprenticeship of four years and were appointed for probationary periods of six months, at the end of which some were permanently appointed and some were dropped on account of excessive spoilage:

THOMAS J. BARNES, JR. (PERMANENTLY APPOINTED).

Date.	Impres- sions paid for.	Sheets spoiled in excess of allowance.	Amount paid for excessive spoilage.	Net earn- ings.
1911.				
July.....	13,930	224	\$3.60	\$97.51
August.....	16,900	298	4.75	118.30
September.....	21,350			149.45
October.....	24,000			168.00
November.....	21,300	96	1.55	149.10
December.....	18,950			132.65
Total.....	116,430	618	9.90	815.01

CARL E. DUEHRING (PERMANENTLY APPOINTED).

July.....	9,300			\$65.10
August.....	19,500	49	\$0.80	136.50
September.....	17,400	151	2.40	121.80
October.....	19,750	66	1.05	138.25
November.....	17,150	236	3.75	120.05
December.....	21,350	79	1.25	149.45
Total.....	104,450	581	9.25	731.15

FRANK GARBES (PERMANENTLY APPOINTED).

July.....	4,940	161	\$2.55	\$34.58
August.....	18,320	248	3.95	128.24
September.....	16,740	21	.35	117.18
October.....	20,040			156.81
November.....	17,120	72	1.65	145.52
December.....	18,450			156.91
Total.....	95,620	502	8.50	739.24

## HAND-ROLLER VS. POWER PRESSES.

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## LEO. L. GRAEVES (PERMANENTLY APPOINTED).

Date.	Impres- sions paid for.	Sheets spoiled in excess of allowance.	Amount paid for excessive spoilage.	Net earn- ings.
1911.				
July.....	8,850	44	\$0.70	\$61.95
August.....	20,800	154	2.45	142.10
September.....	20,670	173	2.75	144.69
October.....	22,850	.....	.....	159.95
November.....	24,250	27	.45	169.75
December.....	24,490	23	.35	171.01
Total.....	121,350	421	6.70	849.45

## WILLIAM P. REHBEIN (PERMANENTLY APPOINTED).

July.....	6,240	32	\$0.50	\$43.68
August.....	20,540	145	2.30	143.78
September.....	19,250	.....	.....	134.75
October.....	16,000	63	1.05	112.00
November.....	21,360	.....	.....	152.45
December.....	19,210	.....	.....	160.51
Total.....	102,600	240	3.85	747.17

## RAYMOND BAKER (PERMANENTLY APPOINTED).

July.....	7,900	22	\$0.35	\$55.30
August.....	18,280	.....	.....	127.96
September.....	19,330	.....	.....	128.31
October.....	19,350	.....	.....	135.45
November.....	21,330	.....	.....	149.31
December.....	16,560	.....	.....	115.92
Total.....	102,750	22	.35	712.25

## LEONARD WILMOT (NOT PERMANENTLY APPOINTED).

July.....	7,350	138	\$2.20	\$51.45
August.....	16,080	724	11.60	112.56
September.....	7,550	350	5.60	52.85
October.....	23,900	61	.95	167.30
November.....	24,480	46	.75	171.36
December.....	11,550	105	1.80	80.85
Total.....	90,910	1,424	22.90	636.37

## ANDREW J. OLDFIELD (NOT PERMANENTLY APPOINTED).

April.....	9,100	255	\$4.10	\$63.70
May.....	16,100	346	5.55	112.70
June.....	20,800	279	4.45	145.60
July.....	13,800	12	.40	102.81
August.....	21,450	174	3.15	163.13
September.....	10,500	16	.25	73.50
Total.....	91,750	1,082	17.90	661.44

## LAWRENCE WAGNER (NOT PERMANENTLY APPOINTED).

July.....	10,930	.....	.....	\$76.51
August.....	6,550	206	\$3.30	45.85
September.....	16,020	191	3.05	112.14
October.....	21,300	242	4.10	149.10
November.....	20,600	13	.20	144.20
December.....	22,600	191	3.05	158.20
Total.....	98,000	843	13.70	686.00



Senator SMOOT. Mr. Ralston, do you wish to ask Mr. Ralph any further questions?

Mr. RALSTON. Is Mr. McKinney offered as a witness?

Mr. RALPH. Yes; I offer Mr. McKinney as an expert plate printer.

Mr. RALSTON. I regret personally as to Mr. McKinney, as he and I are old friends, but I am compelled to ask the committee that Mr. McKinney be sworn. As far as I was concerned, I waived the oath as to Mr. Ralph, but I could not as to Mr. McKinney.

Senator GALLINGER. Is not that, after all, within the competency of the committee to say whether they shall swear witnesses?

Mr. RALSTON. Yes, sir.

Senator GALLINGER. I do not think the committee can be compelled to swear witnesses.

Senator PAGE. We are not permitted to do it at the present time.

Mr. RALSTON. I submit the question to the committee.

Senator GALLINGER. I conducted a good many examinations as chairman of congressional committees, and I never swore a witness when he was known to the committee.

Senator SMOOT. Do you insist on it, Mr. Ralston?

Mr. RALSTON. I regret to put the committee to the slightest inconvenience, but I am compelled as far as it is in my power—

Senator SMOOT. It is not in your power; but so far as the committee is concerned and so far as I am concerned, I am not going to stand in the way of any request so that you could in any way, shape, or form say that you have not been treated more than fair.

Mr. RALSTON. I am quite sure I will never have the occasion to say it.

Senator GALLINGER. I quite agree with the chairman in that respect, that if Mr. Ralston desires it, of course, we will have to get permission from the Senate.

Senator SMOOT. When would you be prepared to be here again?

Mr. RALSTON. I would not like to see any delay at all, but personally it is going to be impossible for me to do very much before Saturday; and I really think that we will get through very much quicker if the committee could see its way clear to grant me until that time.

Senator SMOOT. Can you come Friday, and then that will give us two days this week?

Mr. RALSTON. I can say Friday, Senator, but for one thing; I am unfortunately going to be engaged in court part or all of Friday, until 3 o'clock at least. It is barely possible that court will adjourn at 3 o'clock.

Senator SMOOT. You will be out at 3 o'clock?

Mr. RALSTON. Yes; Mr. Chairman.

Senator SMOOT. Could you be here at 3.30?

Mr. RALSTON. Yes.

Senator SMOOT. If there are no objections, then, on the part of the committee, we will adjourn until Friday at 3.30 o'clock p. m.

Thereupon, at 9.10 o'clock p. m., the committee stood adjourned until 3.30 o'clock p. m., Friday, February 2, 1912.

FRIDAY, FEBRUARY 2, 1912.

UNITED STATES SENATE,  
COMMITTEE ON PRINTING,  
*Washington, D. C.*

The committee met at 3.30 p. m.

Present: Senators Richardson (chairman), Smoot, Gallinger, Page, Kenyon, Smith of Maryland, and Fletcher.

Mr. Joseph E. Ralph, Director Bureau of Engraving and Printing, and Mr. Jackson H. Ralston, attorney for the International Steel and Copper Plate Printers' Union of North America, Local No. 2, appeared.

The CHAIRMAN. The committee will come to order.

Mr. RALSTON. At the time the committee adjourned Mr. Ralph was producing Mr. McKinney as a witness.

Senator SMOOT. Mr. Chairman, I do not know as it makes very much difference how we proceed, but, in my opinion, and in my opening statement I said that I thought it was due to the plate printers for Mr. Ralph to make a statement, and, therefore, we had him make such statement. I think the orderly procedure now would be for you, Mr. Ralston, to proceed with your witnesses.

Mr. RALSTON. I had not contemplated that, Mr. Chairman. I thought that inasmuch as the committee, I assumed, recognized Mr. McKinney as the next witness, and inasmuch as I had further assumed that the proponents of this bill in its present shape were entitled to be heard as to the advantages and benefits to the Government to be derived from the proposed change in the law, and that we were, in a sense, representing the other side, after they had shown to the committee the advantages they expected to accrue to the Government from their position, we could go ahead.

Senator SMOOT. You recognize, Mr. Ralston, do you not, that I said I thought, in justice to the plate printers, Mr. Ralph ought to make a statement. Of course, you also recognize that the proper, orderly way is for you now to proceed.

Mr. RALSTON. I submit this, Mr. Senator and members of the committee: I recognize, of course, the correctness of the Senator's statement as to his own position. We had, however, so fully entertained the other view of the matter as proposed and had come to the final conclusion, in view of the fact that Mr. McKinney had been produced as a witness, that we had not expected to proceed with our evidence at this time.

Senator SMOOT. Mr. McKinney's statement will take but a very few minutes, even if he were to go on.

Senator FLETCHER. I think, as long as we started with this gentleman, Mr. McKinney, if he is here, we should proceed.

Senator GALLINGER. Mr. Chairman, Mr. Ralph, I think, desired to supplement his testimony by the testimony of Mr. McKinney. I think, therefore, we ought to hear him and then let the other side present their case.

**TESTIMONY OF MR. W. C. McKINNEY, CHIEF OF PRINTING DIVISION, BUREAU OF ENGRAVING AND PRINTING.**

Mr. W. C. McKINNEY, having been duly sworn by the chairman, was examined by the committee, and testified as follows:

Direct examination by Mr. RALPH:

Mr. RALPH. Mr. McKinney, what is your present occupation in the Bureau of Engraving and Printing?

Mr. McKINNEY. Chief of the printing division.

Mr. RALPH. How many printers have you under your supervision?

Mr. McKINNEY. About 850.

Mr. RALPH. The record shows that there are 886. How long have you been chief of the printing division, Mr. McKinney?

Mr. McKINNEY. About eight years.

Mr. RALPH. Previous to that you were a practical plate printer in the Bureau of Engraving and Printing?

Mr. McKINNEY. Then foreman.

Mr. RALPH. Before you were a foreman—before you became chief—how long were you foreman of printing?

Mr. McKINNEY. About eight years; eight or nine years.

Mr. RALPH. What do you mean by foreman of printing?

Mr. McKINNEY. I had charge of a section.

Mr. RALPH. How many section foremen are there in the Bureau of Engraving and Printing at the present time?

Mr. McKINNEY. About 20.

Mr. RALPH. Are they plate printers?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. Where did you learn your trade, Mr. McKinney?

Mr. McKINNEY. In the Bureau of Printing and Engraving.

Mr. RALPH. When did you finish your apprenticeship and become a full-fledged journeyman printer?

Mr. McKINNEY. In 1878.

Mr. RALPH. You consider yourself a practical printer in every sense, do you not?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. You are familiar with the power-press work as now executed in the Bureau of Engraving and Printing, are you not?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. When the internal-revenue stamps were put on the power presses in the Bureau of Engraving and Printing, some three years ago, were the designs of the stamps changed?

Mr. McKINNEY. No, sir.

Mr. RALPH. Subsequently the design of the cigar stamps was changed?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. Of course you do not know why the change was made?

Mr. McKINNEY. No, sir.

Mr. RALPH. The present beer stamp printed on the power presses—were they printed on hand presses before they were put on power presses?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. Now, Mr. McKinney, in your official capacity you have had every opportunity to examine the qualifications of the work as executed by the power presses, have you not?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. And to compare the work executed by hand presses as compared with power presses?

Mr. McKINNEY. Yes, sir.

Senator SMITH. And as compared by the work—

Mr. RALPH. He has had every opportunity to witness the quality of the work executed by the power presses. About a year ago you supervised the printing of some one-dollar silver certificates on the power presses, did you not?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. Who was present when you printed those?

Mr. McKINNEY. Mr. Randall.

Mr. RALPH. Who is Mr. Randall?

Mr. McKINNEY. He is foreman of power presses; Mr. Ferguson and Mr. Foster.

Mr. RALPH. Mr. George P. Foster?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. He was chairman of the executive committee of the plate printers' union at that time?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. Who printed the impressions?

Mr. McKINNEY. Mr. John E. Poole.

Mr. RALPH. Was the work printed on power presses—those \$1 notes—in any way favored or any preparations made for the execution of the work?

Mr. McKINNEY. No, sir.

Mr. RALPH. Do you think it was a fair test?

Mr. McKINNEY. I do.

Mr. RALPH. Do you think that the printing of those notes was a fair test of the work of the power press?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. Notwithstanding that you had no time in the preparation of the job?

Mr. McKINNEY. I think this: That if we had had more time in which to do the work we might have improved the conditions. The thing was an experiment at the time.

Mr. RALPH. Ordinarily, in getting up a new job on a power press, how much time does a printer consume in making ready for the job?

Mr. McKINNEY. It will take from several hours to a day.

Mr. RALPH. What is the rule of the Bureau of Engraving and Printing about submitting a first impression, or one of the first impressions, printed on a new job to the chief of the printing division?

Mr. McKINNEY. The first impression that is taken from a plate—that is, the first one that shows the color and what we call a perfect impression, is shown to the chief of the printing division to pass upon the condition of the plate and the color of the work.

Mr. RALPH. Your judgment is final in that, is it not?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. Do you invariably take those impressions and submit them for approval to the assistant director of the bureau, Mr. Ferguson?

Mr. McKINNEY. Where there is any new job started, of any question of color, it is always submitted to the assistant director.

Mr. RALPH. Mr. McKinney, when you were a journeyman printer were you a member of the plate printers' union?

Mr. MCKINNEY. Yes, sir.

Mr. RALPH. After you were foreman of a section were you a member of the plate printers' union?

Mr. MCKINNEY. Yes.

Mr. RALPH. After you became superintendent of printing were you a member of the plate printers' union?

Mr. MCKINNEY. Yes, sir.

Mr. RALPH. When did you sever your connection with the union?

Mr. MCKINNEY. Several years ago. I guess it is three or four years ago.

Mr. RALPH. Was it of your own choice? There were not any rules in the bureau that prevented your remaining a member of the union?

Mr. MCKINNEY. No, sir; I was in the union under a special dispensation. I paid less dues and had no vote, but they did away with that; they apparently did not want the foremen of the printing division in there, and they increased the dues and made them liable to assessment.

Mr. RALPH. What dues did you pay?

Mr. MCKINNEY. Fifty cents a month.

Mr. RALPH. What were they increased to?

Mr. MCKINNEY. To a dollar.

Mr. RALPH. Was that the amount of your dues when you severed your connection with the union?

Mr. MCKINNEY. Yes, sir.

Mr. RALPH. You are a friend of organized labor, are you not?

Mr. MCKINNEY. Yes, sir.

Mr. RALPH. And you are in sympathy with the movement of organized labor?

Mr. MCKINNEY. Entirely.

Mr. RALPH. As a result of the work executed by the power presses in printing the \$1 silver certificates, an exhibit of which Senator Smoot has here, what is your judgment of the notes printed by power presses? Were they executed in such a manner that you would issue them to the public for use?

Mr. MCKINNEY. Yes, sir; those notes that were printed through the power presses and the hand presses, I have never examined them together; but as they came off the press I could not—they were remarkably well done; remarkably well printed, and they compared very favorably with the hand-press work.

Mr. RALPH. You have not seen those notes. May I ask you to let me have them, Senator Smoot?

Senator SMITH. I understood you to say that you had not compared them just now?

Mr. MCKINNEY. I had not compared them with the other work.

Senator SMITH. That is, you have not compared them with the hand-press note?

Mr. MCKINNEY. No, sir.

Mr. RALPH (showing bundle of notes). I will ask you to look at those notes, Mr. McKinney, and tell the committee whether or not you can pick out the notes contained in that exhibit printed on the power presses.

Senator FLETCHER. How many notes are there?

Senator SMOOT. Fifteen.

Mr. RALPH. I think Senator Smoot is the only one that has the key. Is that true?

Senator SMOOT. I am the only one who has the key. I have kept it here in the office.

Senator GALLINGER. Is this the first time you ever saw those notes?

Mr. MCKINNEY. This is the first time I ever saw them together.

Senator SMOOT. You saw them as they came off the press?

Mr. MCKINNEY. Yes, sir; the power press.

Senator GALLINGER. You have no means of determining which of those notes were printed on the hand press and which were printed on the power press, have you?

Mr. MCKINNEY. No, sir.

Senator GALLINGER. There is no mark of any kind?

Mr. MCKINNEY. No, sir.

Senator FLETCHER. There has not been any statement here that some of them are notes printed on power presses and some printed on hand presses. Is that a fact?

Mr. MCKINNEY. Mr. Chairman, I would not attempt to pick out the difference in those notes at all.

Senator SMITH. Do I understand that part of those were printed on power presses and part on hand presses?

Mr. RALPH. Let me make the statement that some of those notes were printed by power press and some by hand press——

Senator SMOOT. Five were taken from stock; five were printed upon power presses; five were printed upon hand presses.

Mr. RALPH. That is, the face of the note.

Senator SMITH. Then 10 of them were done by hand and 5 were printed on power press; is that it?

Senator FLETCHER. The witness says that after examination of these notes, each one of them separately, he is unable to tell which is printed on the hand press and which is printed on the power press?

Mr. MCKINNEY. Yes, sir.

Mr. RALPH. Mr. McKinney, do you believe that the experience you had in printing that number of sheets that were printed on the power press that day did full justice to the class of work that might be executed by the power presses?

Mr. MCKINNEY. No, sir; I do not.

Mr. RALPH. You think that if you had printed that job for two or three days you would get better results?

Mr. MCKINNEY. The farther we can go with it the better we would get them; the better we would handle the job.

Senator FLETCHER. When were these printed?

Mr. RALPH. I do not recall the date; I think January 11, 1911.

Mr. MCKINNEY. January 16, I think.

Senator FLETCHER. That is about a year ago?

Senator SMOOT. I have not the date; if necessary we can get it from the records.

Mr. MCKINNEY. That was about the 16th, Senator.

Senator SMOOT. It would be somewhere in January of last year.

Senator SMITH. I understood you to say you could handle the job better. Do you mean that you could have printed them better or with greater facility?

Mr. McKINNEY. This was a new experience with us. I never saw these notes printed on a power press in my life before, nor any man that handled the job. We started upstairs on the hand presses. We did not know about the arrangement, the manipulation of the ink, or things of that kind, which we would have gained by experience. We did not have a whole lot of difficulty as it was, but we would have made progress by experience.

Senator SMITH. Do you mean to say that the printing of those notes was imperfect?

Mr. McKINNEY. No, sir.

Senator SMITH. How could you handle it better if it was perfect?

Mr. McKINNEY. In starting all jobs we gain experience as we go along. We do it easier.

Senator SMITH. But I understood you to say that it was perfect.

Mr. McKINNEY. No; I did not say it was perfect.

Senator SMITH. Well, what did you say?

Mr. McKINNEY. I said it compared favorably with the work that I have seen from hand presses.

Senator SMITH. You say that you did not compare it with hand-press work?

Mr. McKINNEY. Not at that time; no, sir.

Mr. RALPH. Mr. McKinney, what is the highest class of plate printing; is it done in the proving room by the prover?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. And you believe that the work executed on the power press was equal to the average work done on the hand presses as executed by the average printer?

Mr. McKINNEY. I believe—I know that the work we are doing on the hand presses is as good as the work done by the average printer.

Mr. RALPH. But the expert printer in the proving room exercises more care and deliberation in the wiping of his plate inasmuch as he is paid on a per diem basis and consequently his earnings are not affected by the piece rates. He will execute a higher class of work?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. Who printed those notes in the engraving division?

Mr. McKINNEY. Mr. Ryan; Edward Ryan.

Mr. RALPH. Do you consider Mr. Ryan an expert?

Mr. McKINNEY. Mr. Ryan is one of the best men we have in the business.

Senator SMOOT. Do you think that you could tell the bills printed upon the power press from those printed upon hand presses?

Mr. McKINNEY. No, sir.

Senator SMOOT. Do you consider that the bills printed upon power presses would be more easily counterfeited than bills printed on the hand presses?

Mr. McKINNEY. No, sir; I do not think so.

Senator SMOOT. Do you think that a bill printed upon a power press is no more easily counterfeited than one printed upon a hand press?

Mr. McKINNEY. You must remember, Senator, that we have never printed any upon a power press, excepting these. I think these would be just as difficult to counterfeit as what you have there.

Senator SMOOT. Has there been an improvement in the machines for printing these bills by power, as compared with the machines that were used in 1895?

Mr. McKINNEY. Oh, yes; there has been a great improvement. We have improved the wiper in several different ways. The greatest improvement we ever made on the power presses was the use of a starched wiping cloth. We formerly used, in 1895 and up until the last seven years, a soft wiping cloth, and they gave us a flat, dull impression, and we started to use the starched cloth, the same as is used on a hand press, and we got a totally different impression—a clearer, brighter, sharper impression. The wiping cloth did as much to revolutionize the power-press work as anything else.

Mr. RALPH. Mr. McKinney, you are familiar with the rigging up of the power presses used by the American Bank Note Co. in Ottawa, Canada?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. You have a sample of the rigging of the back blanket and the rubber used by that company, have you not?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. Have you it with you?

Mr. McKINNEY. Yes, sir.

Witness produced sample which was marked "Exhibit A" for identification by the stenographer.

Mr. RALPH. Who gave you that sample?

Mr. McKINNEY. Mr. George P. Foster, chairman of the executive board of the plate printers' union.

Mr. RALPH. Where did Mr. Foster secure that?

Mr. McKINNEY. I think it was last fall on a visit to attend a convention or something.

Mr. RALSTON. This is a sample of Canadian money?

Mr. McKINNEY. It is the rigging in the press.

Mr. RALPH. Blankets used on impression roller. In your judgment will that rigging make as good an impression as the blankets used in the Bureau of Engraving and Printing?

Mr. McKINNEY. No.

Mr. RALPH. Why not?

Mr. McKINNEY. Because—

Mr. RALPH. Is this the power-press blanket?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. I offer this as an exhibit, Senator Smoot.

Senator SMOOT. It will be marked for identification by the stenographer.

Mr. McKINNEY. The roll in the bureau is covered with what we call blanketing to soften the pressure. In the Bank Note Co. in Canada they use a piece of black rubber, a piece of what we call millboard—that is, a hard, tough board—a piece of blanketing, and two pieces of thick rubber. There is not much resiliency to that, and as it moves over the plate it takes out the surface ink alone; it does not go down into the lines, consequently producing a light impression on the plate. With us we use just the simple felt, and the plate in moving under this roller the felt sinks the paper down into the lines and picks up the ink and gives a fuller impression.



Mr. RALPH. It has greater color strength?

Mr. McKINNEY. Yes, sir; it has greater color strength.

Senator FLETCHER. Are you through with this witness, Mr. Ralph?

Mr. RALPH. Yes, sir.

Senator FLETCHER. I would like to ask one question there: What is the effect, if any, upon the workmen in operating and handling and doing work on the power presses and on the hand presses? I would like to know whether there is any greater strain or greater difficulty in working on the power presses as compared with working on the hand presses, and whether there is any difference in the health of the operatives or anything of that sort?

Mr. McKINNEY. The operating of a power press—the labor part of it—is very simple. The man simply polishes the plate with his hand and does not have to pull the press as a hand-press man does. He has to pull the press. Then the hours are good, the work is good, and the majority of the men that go down there get stout doing the work—they gain flesh.

Mr. RALPH. You consider the work much easier physically, do you not?

Mr. McKINNEY. Much easier; not half as hard.

Mr. RALPH. How are the earnings of the men on the power presses as compared with the men on the hand presses?

Mr. McKINNEY. The earnings on the power presses are much larger than on the hand presses. In fact men who could not make over \$5 or \$6 a day make \$8 or \$9 a day on the power press.

Mr. RALPH. Is it a fact, Mr. McKinney, that you have a surplus of power-press printers at times?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. Is it also not a fact that when you call upon those men to go up on the hand presses that a great many of them find excuses to avoid working on the hand presses?

Mr. McKINNEY. When a man has no job on the power press and he is a regular power-press man, it is a difficult thing to get him to go to work on the hand press. He generally has all kinds of ailments and all kinds of trouble.

Mr. RALPH. Do you believe the fine lines on the faces of our notes could be printed as well on the power presses as by the hand presses from experience you have had in printing faces, which I admit is limited?

Mr. McKINNEY. Well, the faces—I am not so positive about faces, because we never have done that, but I am positive we could print the backs just as well as the average man does them on a hand press. I am satisfied of that.

Mr. RALPH. And you state to the committee here that if there are five notes here printed by the power press that in your judgment they are equal to the notes printed by the hand press, do you not?

Mr. McKINNEY. Equally as good; yes, sir.

Senator SMITH. Do I understand you to say that the faces on notes printed on power presses are not as good as those printed on hand presses?

Mr. McKINNEY. No, sir; I said I would not like to make a statement about that, because I do not know, I am not positive; but I know the backs have been printed by power presses for a long time.

They printed them once, and I know we can do a great deal better work than they did at that time.

Senator SMOOT. You do not think that the question of counterfeiting our money would in any way be enhanced by printing it on power presses?

Mr. McKINNEY. Not in my opinion; no, sir.

Senator GALLINGER. I would like to ask this question. Perhaps Mr. Ralph may be able to answer it better than Mr. McKinney. It has been represented to me that these specimen dollar bills, such of them as were printed on power presses, were a selected lot; they were not taken promiscuously from those that came from the press, but they were rather picked out as better impressions.

Mr. RALPH. Senator, I suggest that we ascertain that fact from Mr. Ferguson, when he gets on the stand here. I did not see them printed and had nothing to do with their selection.

Senator SMOOT. We will remember that and ask him.

Cross-examination by Mr. RALSTON:

Mr. RALSTON. Mr. McKinney, how long have you been a plate printer?

Mr. McKINNEY. About 36 years.

Mr. RALSTON. And when you worked at the press you never worked on faces, did you?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. For how long a time?

Mr. McKINNEY. Well, at different times I worked on faces as a chance man.

Mr. RALSTON. That is, you are not regularly employed on faces?

Mr. McKINNEY. No, sir.

Mr. RALSTON. So that your experience, so far as making faces is concerned, is limited. Is not that true?

Mr. McKINNEY. No, sir.

Mr. RALSTON. Well, it is true in so far as you have made your statement; that is to say, you were a chance man, so far as faces were concerned?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. Mr. McKinney, I understood you to say that you were present when these samples, which have been exhibited to the committee, were printed?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. I did not notice on any of the stamps any check letter. Is not that part of the plate. Is not that engraved on the plates?

Mr. McKINNEY. I did not know that a check letter was missing; but it is not a very important thing connected with the printing.

Mr. RALSTON. Perhaps I am wrong about it; but would you indicate the check letter, if it is on there?

Mr. RALPH. The check letter is covered over on the notes that have the check letter by that piece of black paper.

Mr. RALSTON. How many subjects, so called, then, were there on each of the plates from which these printings were taken?

Mr. McKINNEY. One subject on the face of the plate.

Mr. RALSTON. One subject on the face of the plate. Then, as I understand you, that remark of yours would be true about those printed by power. How about the hand notes?

Mr. MCKINNEY. They were the same plate.

Mr. RALSTON. You think the hand notes were on the same plate?

Mr. MCKINNEY. Yes, sir.

Mr. RALPH. They were printed from the same plate.

Mr. RALSTON. How about those taken from stock?

Mr. MCKINNEY. I do not know anything about those.

Mr. RALSTON. Those taken from stock would be printed four subjects on a plate would they not?

Mr. MCKINNEY. Yes, sir.

Mr. RALSTON. Who did you say was the printer who printed these particular specimens?

Mr. MCKINNEY. Mr. John E. Poole.

Mr. RALSTON. He printed the power specimens?

Mr. MCKINNEY. He printed the power impressions.

Mr. RALSTON. At what rate per hour did he print these specimens?

Mr. MCKINNEY. Well, most of the time the press was run at pretty near the regular rate, I could not tell exactly; but the press was run continuously.

Mr. RALSTON. How many were printed altogether?

Mr. MCKINNEY. As many as 40.

Mr. RALSTON. And you say that most of the time it was run at the regular rate. Why do you distinguish between most of the time and the rest of the time?

Mr. MCKINNEY. Well, it was new work you know; it was bothering the men a little bit.

Mr. RALSTON. So that when he was printing on the power-press he was bothered in making the production?

Mr. MCKINNEY. Not a great deal; the ink did not come out very freely and he had to get it off the plate; it took a little more time.

Mr. RALSTON. That was the thing that bothered him?

Mr. MCKINNEY. Yes, sir.

Mr. RALSTON. And that is what delayed the printing?

Mr. MCKINNEY. The printing was not delayed to any extent any more than starting in a new job.

Mr. RALSTON. Well, now, there were 40 specimens printed?

Mr. MCKINNEY. Yes, sir.

Mr. RALSTON. Do you know where the other 35 are?

Mr. MCKINNEY. No, sir.

Mr. RALSTON. Do you know who selected these 5 out of the 40?

Mr. MCKINNEY. No, sir.

Mr. RALSTON. You did not make the selection?

Mr. MCKINNEY. No, sir.

Mr. RALSTON. It was made after it left your hands, if you had charge of them?

Mr. MCKINNEY. I did not have charge of them at all, sir; at any time.

Mr. RALSTON. Do you know why 5 specimens were selected instead of producing all 40 before the committee?

Mr. MCKINNEY. No, sir.

Mr. RALPH. The letter of the Secretary of the Treasury authorized the preparation of 5 specimens.

Mr. RALSTON. But there were 40 printed. What became of the other 35?

Mr. RALPH. They are in the Bureau of Engraving and Printing.

Mr. RALSTON. Have you any objection to producing them?

Mr. RALPH. Well——

Mr. RALSTON. I submit, Mr. Chairman, they ought to be produced. The number is limited.

Mr. RALPH. Until after these five have served their purpose I think it would be unfair to produce any other notes now to be exposed as the product of a power press.

Mr. RALSTON. I think the objection made by the chief of the bureau is the strongest reason why the committee should have the benefit of the other 35. It would be a fair average of work to determine this matter, and not 5 selected out of 40.

Mr. RALPH. I think, Mr. Ralston, you know that you can not start up a new job without making allowance for spoilage.

Mr. RALSTON. It does not appear that these five are the last printed rather than the first printed.

Mr. RALPH. I suggest to Mr. Ralston when Mr. Ferguson takes the stand that he can develop all that. He has those notes in his custody.

Mr. RALSTON. I am asking the committee to direct the production of the other 35.

Mr. RALPH. Mr. Chairman, I do not think that would be fair until they have demonstrated to this committee that they can pick out the notes that are here. I do not think that would be fair at all. I think they ought to come to this committee and point out the difference in the quality of the work.

Mr. RALSTON. You produce the other 35 and we might be able to do it five times out of six.

Senator SMITH. Mr. Chairman, it seems to be an admission that the other 35 are not perfect.

Mr. RALPH. Of course not, Mr. Chairman.

Senator SMITH. That being the case, it does not seem to me that 5 out of 40 is a very good average.

Senator SMOOT. Senator, I suppose you know, as well as every other Senator, that in starting up a job on a new machine that has never been run on that class of work, it is very likely that there will be some spoiled?

Mr. RALPH. I would like to make a suggestion—I make the suggestion—that you will give me legislation to print a limited number on power presses—say, 1,000,000 sheets, and let us demonstrate what kind of work we can do. It will require legislation to do that, Mr. Chairman.

Senator FLETCHER. When Mr. Ferguson gets on the stand we can find out about that. I suggest that we go on at the present time. You have a right to cross-examine the witness further, Mr. Ralston.

Mr. RALSTON. My request of the committee did not involve a stopping of the examination. I want the production of those other 35 notes.

Mr. McKINNEY, what is the reason, if the steam press is capable of doing this work, that it is not quite as capable as producing well the first specimen as it is the fortieth?

Mr. McKINNEY. For the reason that a printer, a man on a hand press, starts a job and prints a great many sheets there even before he gets a good one—the same reason exactly—I have seen men work

for half an hour and not get a good impression, and spoil 20 or 30 sheets. In fact a man who does 800 or 900 a day in starting a job will drop 200 or 300 sheets in his day's work frequently; as a rule he will drop off his day's work.

Mr. RALSTON. Is it not true that, so far as the hand press is concerned, there is only an allowance of from 1 to 2 per cent for spoiled sheets?

Mr. McKINNEY. Yes, sir.

Mr. RALPH. Two per cent?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. On faces?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. And what is the allowance on backs?

Mr. McKINNEY. One per cent.

Mr. RALSTON. One per cent?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. And what is your allowance on the steam press?

Mr. McKINNEY. About one and one-half or two, I think.

Mr. RALSTON. For what kind of work?

Mr. McKINNEY. Almost all work.

Mr. RALSTON. Almost all work?

Mr. McKINNEY. Yes, sir. I would like to say that I was consulting the chief some time ago about having that allowance cut down. We think it is too great.

Mr. RALSTON. On the steam press?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. Coming back to the production of these notes, Mr. McKinney, what adjustments were made in the printing office for these 40 specimens?

Mr. McKINNEY. Well, Mr. Randall, the foreman of the power-press room, made those adjustments and was told to make them exactly like on the hand press.

Mr. RALSTON. Those adjustments were made before the printing began, were they not?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. Were any adjustments at all made after you printed your first sheet?

Mr. McKINNEY. No, sir.

Mr. RALSTON. So, then, there was no reason for difference in any one of the 40 specimens because of adjustments that were made by any printer?

Mr. McKINNEY. No; but there is a reason for differences, because this does happen right along—something may get wrong with a man's blanket, he may get a soft spot in the rag, a hole in the rag; it would make a difference all the time.

Mr. RALSTON. Are you prepared to tell the committee that anything did go wrong in the printing of these 40 specimens?

Mr. McKINNEY. No.

Mr. RALSTON. Are you prepared to say that the blankets were wrong in any way, or the ink?

Mr. McKINNEY. No, sir.

Mr. RALSTON. Are you prepared to say that the printer made any blunders in the polishing?

Mr. McKINNEY. No; we had some difficulty in polishing.

Mr. RALSTON. Not any more than usual?

Mr. McKINNEY. Yes.

Mr. RALSTON. How?

Mr. McKINNEY. For instance, we took the ink just as it came from the hand-press room and put it into the fountain and worked it just as we got it; but, of course, it was a different kind of ink, very different. It was a stronger ink than we had ever worked with.

Mr. RALSTON. And what do you mean by strong and weak ink?

Mr. McKINNEY. Well, I mean an ink—one ink is thick and heavy, and one ink has more strong oil in it than another.

Mr. RALSTON. Well, the ink that was used in the printing of these 40 specimens was the same ink all the while, was it not?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. And did it run uniformly all the while?

Mr. McKINNEY. Well it ran as uniform as that kind of ink could run; yes, sir.

Mr. RALSTON. So that there was no adjustment or delay in the printing of these 40 specimens growing out of the ink?

Mr. McKINNEY. No; except that the ink came out a little thick at times and the printer had to use his rag to get the thick ink off.

Mr. RALSTON. He used his rag to get the thick ink off before the impression was made? Is not that true?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. Then is it not also true that to the extent that he used his rag, the impression which was produced was not a power-press impression pure and simple?

Mr. McKINNEY. I do not think that made any difference, because most of this thick ink was on the plate where there was no printing at all.

Mr. RALSTON. Yes; I know. The power press uses the rag, as you say, mechanically, does it not?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. Then, if I understand you, after the power press had used this mechanical wiper, nevertheless the printer found it necessary to take off still more ink? Is not that true?

Mr. McKINNEY. Not a great deal; but there was some ink there that if he had let it gone through it would just simply have smeared.

Mr. RALSTON. Then the mechanical wiper did not work perfectly? Is that true?

Mr. McKINNEY. The mechanical wiper was working first rate, as far as we saw. We just let the press run as it pleased. We did not want to do that because we did not want to favor this job at all.

Mr. RALSTON. And is it not also true that whenever the printer used that hand rag for wiping he had to stop the press?

Mr. McKINNEY. No; not always.

Mr. RALSTON. He did sometimes, did he not?

Mr. McKINNEY. Well, I think he did. I am not positive about that.

Mr. RALSTON. Well, then, to the extent that he stopped the press?

Mr. McKINNEY. I did not say he stopped the press.

Mr. RALSTON. I understood you to say that he did sometimes.

Mr. McKINNEY. I think he did sometimes. I am not positive about that.

Mr. RALSTON. To the extent that he may have stopped it—stopped the press—and to the extent that he used the hand wiper he was not producing a power-press impression pure and simple, was he?

Mr. McKINNEY. Well, I think he was, because we do that on the power presses now—men do that every day on the power presses.

Mr. RALSTON. But if he does it it is not a pure power-press impression, is it?

Mr. McKINNEY. Well, in the strictest sense of the word, no.

Mr. RALSTON. Does the power-press work eliminate the use of a hand wiper by a printer?

Mr. McKINNEY. Not our presses; no, sir.

Mr. RALSTON. Now, then, you had a single subject on that plate. Is not that true?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. Is it not more easy to adjust the mechanical wiper to the single subject than it would be to four subjects or eight?

Mr. McKINNEY. No, sir; it would be just as easy to adjust it to—we have plates with 30 subjects—just as easy to adjust it to 30 subjects as to 1.

Mr. RALSTON. Who printed the five-hand specimens you produced here?

Mr. McKINNEY. It was Mr. Ryan, in the engraving division.

Mr. RALPH. He did not say that there were five printed.

Mr. RALSTON. I understood that there were five hand specimens here and five from stock.

Mr. RALPH. We printed 10, I think. The record will show.

Mr. RALSTON. How many hand specimens were printed?

Mr. McKINNEY. I do not know, sir.

Mr. RALSTON. You heard the chief say that there were 10?

Mr. McKINNEY. That is the first time I ever heard it.

Mr. RALSTON. Were you present at the time of that printing?

Mr. McKINNEY. No, sir.

Mr. RALSTON. Then you do not know why the other hand impressions were not produced?

Mr. McKINNEY. No, sir.

Mr. RALSTON. Do you know who printed the five specimens which were taken from stock as stated? Mr. McKinney, do you know whether any attempt was made to trace them up by following the number of the plate or otherwise?

Mr. McKINNEY. I do not know anything about that, Mr. Ralston, at all.

Mr. RALSTON. You know nothing of the circumstances of their production?

Mr. McKINNEY. No.

Mr. RALSTON. Mr. McKinney, you were familiar, were you not, with the old contest which came up before Congress about 22 years ago?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. And you took some active part at that time, did you not?

Mr. McKINNEY. Well, I was not on the committee. I was just the same as any other member of the union. I contributed.

Mr. RALSTON. You were with the committee, were you not?

Mr. McKINNEY. Oh, yes; we all were with them.

Mr. RALSTON. And you rendered the committee all the service in your power?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. Is it not a fact that at that time you repeatedly expressed your opinion as to the very great inferiority of steam-press work over hand-press work?

Mr. McKINNEY. Yes, sir. I say that now; that the work at that time was very inferior work and the men that worked on that work to-day admit that it was very inferior work.

Mr. RALSTON. Let me ask you if it was not true that at and before that time faces and backs of the silver certificate had been printed on the steam press?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. And is it not also true that there was very great complaint of that printing in many directions and for many reasons?

Mr. McKINNEY. Yes, sir; there was.

Mr. RALSTON. Isn't it true that the money wore out very much quicker?

Mr. McKINNEY. I do not know that.

Mr. RALSTON. Is it not also true that it was considered much more subject to counterfeiting than other work?

Mr. McKINNEY. Well, I know that the notes that were printed on power presses at that time were very poor work, and consequently poor work is easily counterfeited. But that work is not compared and the presses are not to be compared with the work we are doing now. Those impressions were printed entirely different from what we print them now.

Mr. RALSTON. You have in the bureau to-day, have you not, some of the presses used at that time?

Mr. McKINNEY. No, sir.

Mr. RALSTON. Have you not some of the presses that are substantially identical?

Mr. McKINNEY. No, sir.

Mr. RALSTON. Do not the presses you have there, dating back to 1898, substantially identically date back to 1888?

Mr. McKINNEY. No, sir.

Mr. RALSTON. Will you state the difference in principle affecting the printing?

Mr. McKINNEY. Well, in the first place the rollers, the printing rollers, are different altogether. It is run in a different way. The printing roller on those old presses was an idler, that is, and the bottom roller was run by a chain—that is, the top roller was made a D-roller and is run by a chain. The wiper is different and the rags are different; the wiping cloths are different. As I said before, the greatest improvement that was made in a press since that time was the D-roller and the wiping cloths. The wiping cloths gave us an entirely different strength of impression. We can take the wiping cloth that we used those days and put it in and get an impression, just as we did in those days, probably.

Senator FLETCHER. Notwithstanding the different roller?

Mr. McKINNEY. Yes, sir; the wiping cloths have as much to do with the impression as anything else; more to do with it. Another thing, these presses are constructed better. They are better running;



they are smoother running presses; they do more work more easily than they did before.

Senator FLETCHER. You spoke of a roller being an idler. I suppose that means that it moves?

Mr. McKINNEY. Yes, sir; one moves when the plate is underneath it.

Mr. RALSTON. At the present time you have a single inking roller, have you not, that goes over the plate?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. And before you had two, did you not, in the old make of machine?

Mr. McKINNEY. Yes; they did work them, but they never worked them for any length of time. There were two, and there were places made for three rollers, altogether.

Mr. RALSTON. Well, that is a question, as far as the rollers are concerned, which only affects the distribution of the ink over the face of the plate, is it not?

Mr. McKINNEY. We found that the extra rollers did not help the distribution; that they picked the ink up rather than distributed it. You know that on an ordinary printing press the ink is totally different, and it calls for distributing rollers; but we do not. We fill it in.

Mr. RALSTON. The hand printer, however, goes over the plate two or three times, does he not?

Mr. McKINNEY. Not as a rule; he does not. He should do it, but he does not.

Mr. RALSTON. He should do it to get proper results?

Mr. McKINNEY. He should, but he don't.

Mr. RALSTON. Does this second going over the hand roller pull the ink out that was put in there the first time?

Mr. McKINNEY. No; because his roller is filled with ink, and he puts enough on his plate to distribute it two or three times, if he does it right. But as a rule he does not do that; as a rule the men do not fill their plates in properly. I would like to state that I have called the chief's attention to that same fact.

Mr. RALSTON. You mean that the men are not competent or, at least, do not do their work in a competent fashion?

Mr. McKINNEY. Yes, sir; the majority of the men; a great number of the men. That is the trouble with them; they slight their work in filling it in.

Mr. RALSTON. Now, then, if a hand-roller printer finds it necessary to use the roller twice, what difference in printing is there between that and using two rollers on a power press?

Mr. McKINNEY. Because that has been shown by actual practice, actual experience, that the two rollers appeared to be no good at all. We produced better impressions with the one roller than with the two.

Mr. RALSTON. When was the first single roller on a steam press or power press put in?

Mr. McKINNEY. I could not tell you.

Mr. RALSTON. Now, the next change which you speak of is the improvement in the wiping cloths?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. What change was that—exactly?

Mr. McKINNEY. We used cloths just as we got them from the mill, starting them in just as they came from the mill. It was muslin and soft. Now you wash those cloths and dry them and put them in the press; that cloth will dig down under the surface of the plate and pick the ink out of the lines, while a starched cloth goes right down into the top of it. We use a starched cloth on a power press for the same reason that a starched cloth is used on a hand press. If a man on a hand press gets a rag that is too soft he protests right away, and the rag is starched on the power press for that same reason.

Mr. RALSTON. When did you first use starched rags on power presses?

Mr. McKINNEY. It was some 8 or 10 years ago.

Mr. RALSTON. Not more than that?

Mr. McKINNEY. No, sir.

Mr. RALSTON. Now, so far as the mechanical arrangements of the press are concerned, as I understand you, there has been—except as I have examined you—no change bettering the conditions as to the power presses since the time of your opposition 20 years ago?

Mr. McKINNEY. Oh, yes, sir. We have changed the wipers—the presses have been better built; the presses work more smoothly; the whole construction is better.

Mr. RALSTON. That does not affect the printing of them.

Mr. McKINNEY. Oh, yes.

Mr. RALSTON. That does not affect the printing of them.

Mr. McKINNEY. Yes; it does, because the press is more easily manipulated. It is more easily handled. In fact, the press is so easily handled that it will handle itself. I want to explain about the wipers. Within the last year we have made an improvement in the wiper that we consider of great importance. That wiper, to replace the pad, had to be entirely dislocated from the press. What I mean by the pad is the arrangement that the cloth runs over. All of the machinery would have to be taken off the press, the shifting gear cast loose and pried up with a board. The standards that held this wiper ran down through a sleeve on each side. In prying it up that way on one end, this way or that way, it cut the inner side of these sleeves. Consequently, when that wiper went back it did not go back in the same bearings it had been in before. That affected that wiper; it affected the motion of the wiper. Now, we made that wiper so we could take off the bar of the wiper and slide that out just as you do a drawer, without lifting the wiper at all. The wiper can stay in. Then another thing we did was to have those disks revolve in an oil cup instead of bearing right on the sleeve. That increased the efficiency of the wiper. Then the tension of the rags, we changed that. That is governing the passage of the rag under the pad. We enlarged the disks so that we could give more change to the wiper, so consequently we consider that the wiper that is used in the presses that have been made in the past two years are better and an improvement on the wiper that was used two years ago, or the year previous to that, or six months previous to that.

Senator FLETCHER. Is that an expensive part of the machine, or not?

Mr. McKINNEY. No; it is not the most expensive part of the machine.

Senator FLETCHER. I did not say the most expensive part of the machine; but is the wiper an expensive and important part of the machine? Is it costly?

Mr. McKINNEY. No, the wiper; we place so much importance on the wiper because the wiper really is the life of the machine, and the more efficient we can get that and the more easily we can get it to work the better we do with the printing.

Mr. RALSTON. Mr. McKinney, what is the pressure to the square inch—if we may put it that way—of the wiper on the plate?

Mr. McKINNEY. I do not know, sir.

Mr. RALSTON. How is it, compared with the pressure used by the hand by the plate printer?

Mr. McKINNEY. I could not tell you, because I do not know the pressure used by hand by the plate printer; that varies.

Mr. RALSTON. Can you approximate the relative relation?

Mr. McKINNEY. No; because we have a great deal of trouble to get the men to use the proper pressure on hand presses; that is one of the greatest difficulties we have.

Mr. RALSTON. You mean the proper pressure in wiping a plate?

Mr. McKINNEY. To print.

Senator SMOOT. Does your wiper on the power presses to-day run on ball bearings?

Mr. McKINNEY. No, sir; we contemplate making them ball-bearing. The pressure on the plate of a wiper can be made any weight you want it. It can be made just merely to touch the plate—skim it; it can be made so as to touch the plate there, and you can hardly see that the wiper has gone over it.

Mr. RALSTON. In practical experience, how is it—is it pushed down against the plate closely, hard, or not?

Mr. McKINNEY. No, sir; if it was down close to the plate it would wipe out the impress and give you a poor impression.

Mr. RALSTON. Is not the necessary effect of the wiper to take the ink out of the lines—pull it out?

Mr. McKINNEY. Not if properly arranged; no, sir.

Mr. RALSTON. Not if properly arranged?

Mr. McKINNEY. No, sir.

Mr. RALSTON. Have you ever seen one arranged so that it did not?

Mr. McKINNEY. That it did not take the ink out, Mr. Ralston; no, sir.

Mr. RALSTON. Mr. McKinney, as a plate printer of many years standing, will you tell us if a plate printer uses his judgment in the exercise of his wiping rag?

Mr. McKINNEY. Well, I would answer that the same as with the question about the printer; that is, if the plate printer properly handles his plate he uses judgment; but there are a great many men and a very large percentage of them that do not use the proper judgment in wiping with the rag.

Mr. RALPH. On hand presses?

Mr. McKINNEY. On hand presses and on power presses, too.

Mr. RALSTON. Mr. McKinney, suppose a plate printer had before him a plate which would be the reverse, of course, of those four [indicating], and had to take an impression. How would he wipe that plate?

Mr. McKINNEY. How would he wipe that plate?

Mr. RALSTON. Yes.

Mr. McKINNEY. He would use his own judgment in wiping that plate. You could not tell any man how to wipe a plate, Mr. Ralston, because no two men wipe a plate alike; there is no set rule about that.

Mr. RALSTON. If you yourself were going to wipe it, how would you do it?

Mr. McKINNEY. I would wipe it to get the best impression, and I would wipe it so as not to wipe the lines out.

Mr. RALSTON. You would not want to wipe the lines out?

Mr. McKINNEY. No, sir.

Mr. RALSTON. In what manner would you do that?

Mr. McKINNEY. The proper way would be to wipe across the lines.

Mr. RALSTON. Wipe across the lines?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. Then you would notice the general contour of the lines?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. There is constant change, is there not? Here are four different plates. Would you have to consider each one of those four in arriving at that result?

Mr. McKINNEY. Yes, sir; you would have to consider every part of the plate.

Mr. RALSTON. Then that one point you would wipe, let us say, across the lines, here, and here, perhaps, and then the reverse way, perhaps, in another part of the plate?

Mr. McKINNEY. You could not do that on a plate like that. You would have to get one general system of wiping that would come as near that as you possibly could. There is not any man up there in the bureau that wipes a plate four or five different ways—a hand plate. He usually wipes it one way, and you will find that with the majority of men they will wipe most all the plates they get straight up and down.

Mr. RALPH. What do you mean by straight up and down?

Mr. McKINNEY. From top to bottom. If they get a good impression it is all right; if they do not get a good impression it is all right.

Mr. RALSTON. Your mechanical wipers on a power press move in different directions?

Mr. McKINNEY. They move about half of a circle.

Mr. RALSTON. They take no note of the thing they are wiping. Is not that true?

Mr. McKINNEY. Well, I would answer that this way: When they got a power press they had to get a motion that would wipe as near across the lines—get a motion that would come as near to taking in all kinds of engraving as anything we can get—and it does that, because the power press, as a rule, does not wipe out the lines.

Mr. RALSTON. It takes in all kinds of engravings, then, but no particular kind of engravings; is not that true?

Mr. McKINNEY. Yes, sir. It is the nearest thing we can get to a hand wipe. That has been acknowledged by almost everybody.

Mr. RALSTON. Then there is a difference between that mechanical wipe and a hand wipe?

Mr. McKINNEY. There is a difference.

Mr. RALSTON. Which gives the best result, the careful hand wipe or the mechanical wipe?

Mr. McKINNEY. Well, if we had all our notes printed by the most skilled mechanics and in the most intelligent way they would produce better work than a power press. There is no doubt about that.

Mr. RALSTON. Then the hand-press man is capable of better work than the power-press man can do?

Mr. McKINNEY. A first-class man; yes, sir.

Mr. RALSTON. If you want to take a proof of a fine engraving would you put it in a steam press?

Mr. McKINNEY. Certainly not.

Mr. RALSTON. Perhaps it is repeating, but I will ask you, why not?

Mr. McKINNEY. Because we are speaking about bank notes, and an engraving is an entirely different thing.

Mr. RALSTON. A bank note is an engraving.

Mr. McKINNEY. But it is not a fine steel engraving of the same character that a print would be. A print is a very large plate, and a print is full of light and dark places. Some of it is shallow and some deep. Each one of those places has to be handled differently, which you do not give the bank note.

Senator SMITH. Then, do I understand you to say that the best work on hand printing is better than the best work on power printing, if you get the very best?

Mr. McKINNEY. I think so; yes.

Mr. RALPH. Mr. McKinney, if a printer gave you the best possible result on a hand press what would be the number of impressions he would make?

Mr. McKINNEY. He would do much less; I can not tell the number.

Senator SMOOT. Than he is doing to-day?

Mr. McKINNEY. Yes, sir.

Senator SMOOT. Take the ordinary money that we are distributing in the United States to-day. Can a power press do it just as well as it is being done by hand press to-day.

Mr. McKINNEY. I think so. The ordinary man's work can be done by a power press just as well.

Senator SMOOT. In all cases where there is no special reason for extra care this is true?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. Mr. McKinney, you said that these were bank notes and not engravings?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. Let me call your attention to that \$5 bill.

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. Are there not fine engravings on that?

Mr. McKINNEY. Yes, sir; but those engravings are not of the same character of work that a fine steel print is, and they are engravings—now, I am not an engraver, and I do not propose to go into the engraving business or to say anything about it, or talk about something I am not familiar with; there are people that can tell you more about that than I can; but, in my opinion, these pieces here are made for the purposes they are intended for—for bank notes—and they are as fine as possibly can be done for that purpose; and I venture to assert that if these men who engrave this were to engrave a picture or a copy of a painting they would use different methods altogether, so that I do not think—I know this does not compare; there is no comparison at all between this one and a fine steel engraving.

Mr. RALSTON. And you think, then, that the engraving of our currency is inferior in character?

Mr. MCKINNEY. No, sir; I do not say that; I say it is as fine engraving as is done for bank-note purposes—the finest.

Mr. RALSTON. There is what you call a proving room, is there not, in the bureau?

Mr. MCKINNEY. Yes, sir.

Mr. RALSTON. Are there any steam presses in that proving room?

Mr. MCKINNEY. No, sir.

Mr. RALSTON. The proofs are made, are they not, very carefully by hand printers?

Mr. MCKINNEY. Yes, sir.

Mr. RALSTON. I think you were asked, were you not, if you would undertake to state which one was hand or steam press impressions in the 15 notes exhibited to you?

Mr. MCKINNEY. Yes, sir.

Mr. RALSTON. You stated you would not undertake to do it?

Mr. MCKINNEY. No, sir; I would not.

Mr. RALSTON. Mr. McKinney, when were the designs of the revenue stamps changed—I will take the different ones?

Mr. MCKINNEY. Well, you take the 50 cigars.

Mr. RALSTON. Yes; you take the 50 cigars, for instance.

Mr. MCKINNEY. We started the revenue work upon the power presses; we took the same plates—not the same plates, but the same design plates—down on the presses with us. Then we worked them for a while and they were changed.

Mr. RALSTON. How long did you work them before you changed?

Mr. MCKINNEY. Quite a while; I could not say just when.

Mr. RALSTON. Do you remember what year the change took place?

Mr. MCKINNEY. No; I could not tell you that. It is only a few years ago.

Mr. RALSTON. You do not remember the character of the change?

Mr. MCKINNEY. The character?

Mr. RALSTON. Yes.

Mr. MCKINNEY. Yes, sir. The number of subjects were increased on a plate. What I mean by that is this: There were 10 on the old plate and they have increased to 30 on the new plate.

Mr. RALSTON. Was the character of the design changed?

Mr. MCKINNEY. Yes.

Mr. RALSTON. In what way; do you remember?

Mr. MCKINNEY. Well, I do not understand just what you want to get at.

Mr. RALSTON. I simply want to know what was the character of the design you had in the first instance and what it was changed to afterwards. I do not mean the size, because that has nothing to do with the character.

Mr. MCKINNEY. That is a very indefinite question, because if I know exactly what you want to get at I can tell you.

Mr. RALPH. I have the samples here.

Mr. MCKINNEY. I suppose you want to know whether the design was uniform?

Mr. RALSTON. I want to know if it was simplified.

Mr. RALPH. You are speaking now about fifty cigars?

Mr. McKINNEY. The fifty cigars that we printed on the hand-power presses when we first took them down there—it was very heavy work and the new designs were lighter.

Mr. RALSTON. Lighter?

Mr. McKINNEY. Yes, sir.

Mr. RALSTON. What made the difference between the heavy and light; the depth of the lines or the number?

Mr. McKINNEY. No; I would not say that. I think that the new designs were better designs; they were more refined than the other designs. The other work was very coarse, in that when we worked on a hand press with the fifty cigars the work was so heavy we had to fill the plates in with soap before we could print.

Mr. RALSTON. It took a very large amount of ink?

Mr. McKINNEY. Yes; the present design we use is an improvement on the old design. It is a finer piece of work.

Mr. RALSTON. Take the next largest amount, or a specimen of the next largest number of stamps produced down there.

Mr. McKINNEY. You mean one hundred cigars? The twenty-fives, the one hundreds, and the fifty cigars—the designs were all changed and these designs were all heavier. They were all deeper cut than the old design.

Mr. RALSTON. Those were the old designs [indicating]?

Mr. McKINNEY. Yes, sir; those were the old designs. The work is much lighter; the work is not as deep.

Mr. RALSTON. Are those the new designs [indicating]?

Mr. McKINNEY. Yes.

Mr. RALSTON. This is the new?

Mr. McKINNEY. Yes; that is the new one [indicating]. That work is much coarser than the new.

Mr. RALSTON. This is the old [indicating]?

Mr. McKINNEY. Yes.

Mr. RALSTON. And this is the new [indicating]?

Mr. McKINNEY. Yes.

Mr. RALSTON. Is it not true, as a matter of fact, that you have diminished the complexity of the engraving in order to accommodate the work to the steam press?

Mr. McKINNEY. No; not at all. I would say right there that that in my opinion is not a fact, but that is a question that an engraver should answer, I think.

Mr. RALSTON. What would be your next most numerous stamp?

Mr. McKINNEY. The beer stamp.

Mr. RALSTON. Are they here?

Mr. McKINNEY. Yes.

Mr. RALSTON. Was there any change in the beer stamp?

Mr. RALPH. Half-barrel beer is the greatest number we print.

Mr. RALSTON. Half-barrel beer stamp. On the steam press you have done away with the vignettes entirely, have you not?

Mr. McKINNEY. You will see, Mr. Ralston, that those stamps were printed on the hand presses.

Mr. RALSTON. That is the old one.

Mr. McKINNEY. No; the new one.

Mr. RALSTON. What is your next most numerous class of stamp?

Mr. RALPH. Perhaps tobacco.

Mr. RALSTON. Let us stop, if you will, and take the wholesale liquor. Is this on which my hand rests the old hand-press impression?

Mr. RALPH. Yes, sir; this tint was printed on the surface—this border here.

Mr. RALSTON. And is it printed on the surface now?

Mr. RALPH. No, sir; we do not print any on the surface now.

Mr. RALSTON. You have other illustrations of this stamp that are done on the steam presses?

Mr. RALPH. Yes, sir.

Mr. RALSTON. Is it not true that you have done away with the very finely executed vignettes?

Mr. McKINNEY. You mean the border?

Mr. RALSTON. Yes.

Mr. McKINNEY. The border does not appear there; no, sir.

Mr. RALSTON. It no longer appears, the work having been transferred to the steam press.

Mr. McKINNEY. I do not know anything about the reason for it, but it does not appear.

Mr. RALSTON. Is it not true, taking it all the way through, that in order to accommodate the revenue work to the capacity of the steam press there has been a corresponding diminution in the character of the engraving?

Mr. McKINNEY. No, sir.

Mr. RALSTON. Is not that shown by the specimens you present here?

Mr. McKINNEY. No, sir; it is not, because we use identically the same stamp. With the tax-paid spirituous stamp the work is just as delicate as it was before. On the cigar stamp it is more delicate work than it was before.

Mr. RALSTON. Well, I am speaking of the most numerous stamp; that is, the stamp most extensively used. Have they not suffered a deterioration?

Mr. McKINNEY. I do not see it, Mr. Ralston.

Mr. RALSTON. Very well, we will not argue it.

You stated something in the first part of your examination about impressions being submitted to Mr. Ferguson when a new job was started, if I remember correctly.

Mr. McKINNEY. Not when a new job is started; because lots of new jobs—it is only when a question of color comes up. If there is a slight variation in the color, before we go ahead with it we submit it to Mr. Ferguson. In fact, we get permission to go ahead with the job before we do, if there is any variation at all in the color.

Mr. RALSTON. I think that is all, Mr. Chairman, I want to ask this witness.

Redirect examination:

Mr. RALPH. Mr. Chairman, I would like to ask a few questions. You say that the ink was thick on the plate when Mr. Poole pulled those impressions and he had to wipe it off with a rag. Is not that the duty of a plate printer?

Mr. McKINNEY. Yes, sir; they are doing it every day.

Mr. RALPH. If it were not for the fact that a plate printer occasionally wipes the plate off, you would not need a printer on the press at all, would you?



Mr. McKINNEY. No, sir.

Mr. RALPH. Have you seen them use the power presses in the American Bank Note Co.?

Mr. McKINNEY. No, sir.

Mr. RALPH. Did Mr. Poole change the wiper, adjust it, lift it, or lower it to reduce or increase the pressure?

Mr. McKINNEY. Not at all; no, sir.

Mr. RALPH. There is no rule in the Bureau of Engraving and Printing to prevent the printer from wiping the surplus ink off, is there?

Mr. McKINNEY. No; as I said, they are doing it all the time. They are doing it every day.

Mr. RALSTON. Mr. Chairman, at the last meeting, when you were not present, Mr. Ralph offered a piece of evidence, or offered something as evidence, to which I objected, and that was a statement made by Mr. Poole. I said to him and said to the committee at the time that I should be very glad of course to see Mr. Poole produced and would be very happy to see him before the committee, and I thought the committee was entitled to hear Mr. Poole himself.

Mr. RALPH. Mr. Ralston, I will call Mr. Poole to the stand. Mr. Randall, foreman of the power-press room, met with an injury and this is the first time he has been out of his room for sometime. Indeed, he is hardly able to come down here to-day to testify. I would like to have him take the stand now.

**TESTIMONY OF MR. CHARLES A. RANDALL, FOREMAN OF POWER-PRESS ROOM, BUREAU OF ENGRAVING AND PRINTING.**

Mr. RANDALL, having been duly sworn by the chairman, was examined by the committee, and testified as follows:

Direct examination by Mr. RALPH:

Mr. RALPH. Mr. Randall, you are a practical plate printer, are you not?

Mr. RANDALL. Yes, sir.

Mr. RALPH. How long have you been working at the trade of plate printing?

Mr. RANDALL. Thirty-five years, about.

Mr. RALPH. How long did you work on a hand press?

Mr. RANDALL. On a hand press? Why, let me see; about 16 years.

Mr. RALPH. Did you ever work on a power press?

Mr. RANDALL. Yes, sir.

Mr. RALPH. As a journeyman printer on a power press?

Mr. RANDALL. Yes, sir.

Mr. RALPH. You are now foreman of the power-press room where we print the postage stamps and other stamps on power presses, are you not?

Mr. RANDALL. Yes, sir.

Mr. RALPH. How long have you been foreman of the power-press room?

Mr. RANDALL. Eighteen years.

Mr. RALPH. You were present on the day on which Mr. Poole printed the notes, the \$1 silver certificate faces, were you not?

Mr. RANDALL. Yes, sir.

Mr. RALPH. In fact, you prepared the press for the job, did you not?

Mr. RANDALL. Yes, sir.

Mr. RALPH. What did you do to the press? Please tell the committee actually what you did to that press?

Mr. RANDALL. All I did was to put in the necessary blankets, packing, and some ink in the fountain; put the plate down, wiped the wax off.

Mr. RALPH. Did you pull an impression from the plate before Mr. Poole came on the press?

Mr. RANDALL. No, sir.

Mr. RALPH. Did you put the ink in the fountain?

Mr. RANDALL. Yes, sir.

Mr. RALPH. You put the ink in the fountain and had the press adjusted ready for Mr. Poole to operate, did you?

Mr. RANDALL. Yes, sir.

Mr. RALPH. As a result of the work of the power press that day—of course, you examined the notes from time to time as they were printed?

Mr. RANDALL. I did.

Mr. RALPH. As a result of the examination of the notes printed that day on that power press, what is your judgment of the notes, as to quality and standard, as compared to hand-press notes?

Mr. RANDALL. I thought they were very good; in fact, I was surprised.

Mr. RALPH. You were surprised they were so good?

Mr. RANDALL. Yes, sir.

Mr. RALPH. Had you in any way favored the job on the press?

Mr. RANDALL. Not in the least.

Mr. RALPH. Ordinarily when you have a new job, how much time would you devote to getting the press running, as a rule?

Mr. RANDALL. In years gone by we have been as long as six or eight weeks, but we have progressed very rapidly in the last few years. I can start a job in half an hour, or two hours, according to the job.

Mr. RALPH. You have made many improvements in the power presses since you have had charge of the room, have you not?

Mr. RANDALL. Yes, sir; I have suggested a few, and I have put in those that have been suggested.

Mr. RALPH. You think the power press to-day is superior to the power press of 18 years ago, do you not?

Mr. RANDALL. There is no doubt about it; there is no doubt in my mind.

Mr. RALPH. What improvements have been made?

Mr. RANDALL. The wiper is better, the top-roll impression is better, and the press runs better in every way. We used to call the old presses that I worked on "rattle boxes." That is the name we gave them.

Mr. RALPH. Mr. Randall, you put currency ink in the fountain that day. Will you tell the committee why you used currency ink in place of the regular ink?

Mr. RANDALL. Because it was the first job on power presses and I started it with the ink used upstairs.

Mr. RALPH. Is the ink used on revenue the same as is used upstairs?

Mr. RANDALL. It is softer.

Mr. RALPH. What do you mean by "softer"? Has it less consistency?

Mr. RANDALL. Yes, sir.

Mr. RALPH. Was there any advantage in using that ink?

Mr. RANDALL. You mean the facing ink?

Mr. RALPH. Yes; the heavier ink.

Mr. RANDALL. No, I don't think so; I think it would work a little better.

Mr. RALPH. You think the press would have operated better if you had used the softer ink?

Mr. RANDALL. I do.

Mr. RALPH. Tell the committee why.

Mr. RANDALL. Because it wipes better.

Mr. RALPH. Does it flow better out of the fountain?

Mr. RANDALL. Yes, sir; it flows better out of the fountain, of course.

Mr. RALPH. It distributes better?

Mr. RANDALL. It is thicker; it thickens up in the fountain like sawdust, because it does not get a chance to flow in.

Mr. RALPH. Mr. Randall, as foreman of the power-press room, you frequently visit the engraving division and have conferences with the chief of the engraving division about the condition of the engraving plates you are using?

Mr. RANDALL. Yes, sir.

Mr. RALPH. Have you ever discussed with him or any chief of the Bureau of Engraving and Printing the necessity of using heavier lines of greater depth or width or coarser engraving to print on power presses than on hand presses?

Mr. RANDALL. Nothing that I can recall.

Mr. RALPH. In your judgment, Mr. Randall, as a practical plate printer, do you believe that you can execute work as well on power presses and equal to the standard now maintained by the hand presses in the printing of the faces?

Mr. RANDALL. I am satisfied the power presses, from what I have seen them do, can print the work as good as four-fifths of the printers.

Mr. RALPH. Then would I infer from your statement that only one-fifth of our work is good?

Mr. RANDALL. No; as you well know—we all know——

Mr. RALPH. Or that one-fifth of the printers excel in the quality of work?

Mr. RANDALL. They excel in their work and take more pains. They are better printers.

Mr. RALPH. That is all, Mr. Chairman.

Senator FLETCHER. What length of time did it take, Mr. Randall, to run off those 40?

Mr. RANDALL. About 35 minutes.

Senator FLETCHER. Did that include the preparation and the actual time consumed?

Mr. RANDALL. No, sir; the actual time of printing was about 35 minutes.

Senator FLETCHER. That would be about a minute to each bill?

Mr. RANDALL. About 35 minutes.

Senator FLETCHER. And how much time was spent in preparation?

Mr. RANDALL. It took me to rig the press up about 20 minutes, I guess.

Senator FLETCHER. How many could you print before you had to rig the press up again?

Mr. RANDALL. We could have continued printing, if they had let us.

Senator FLETCHER. You could have gone on printing them at that rate?

Mr. RANDALL. We could have kept going right along, if they had not stopped us.

Senator SMOOT. Mr. Randall, do you think that a note printed on a power press is easier counterfeited than one printed upon a hand press?

Mr. RANDALL. I can not see why it should be.

Senator SMOOT. How long have you been in the Bureau of Printing and Engraving?

Mr. RANDALL. Thirty-five years.

Senator SMOOT. Are the machines that you now have there—the power presses—an improvement over what they were in 1889?

Mr. RANDALL. They are a big improvement, the ones I work on; yes, sir.

Senator SMOOT. They do better work?

Mr. RANDALL. Yes, sir.

Senator SMOOT. And more of it?

Mr. RANDALL. Yes, sir.

Senator SMOOT. And is it easier for a man to work on a power press than on a hand press?

Mr. RANDALL. Yes, sir.

Senator SMOOT. Do you think that the ordinary plate printer would prefer to work upon a power press than upon a hand press?

Mr. RANDALL. I can imagine so; yes, sir.

Senator SMOOT. The wages are a great deal more, are they not?

Mr. RANDALL. The wages are better, and the work is lighter.

Senator FLETCHER. How long would it take to run these off, all together?

Mr. RANDALL. That is according to who printed them. An ordinary printer ought to do them in 20 or 25 minutes, say.

Senator FLETCHER. Do you mean to say that it took the power press 35 minutes to do what a man could do on a hand press in 25 minutes?

Mr. RANDALL. You lose sight of the fact that we were starting in a job and getting it ready.

Mr. RALPH. Ordinarily a power press accommodates 4 plates, and there was only 1 plate on this press; so that, if the press was in full operation, those 40 impressions would have been multiplied by four.

Senator SMOOT. Supposing the machine had been in running order and you wanted to continue printing, or we had authority to do so. Do you know how many impressions could have been made in an hour?

Mr. RANDALL. With just one plate? You know, we only had one plate on.

Senator SMOOT. I know you only had the one subject on the plate; but suppose you had run regular, making regular speed.

Mr. RANDALL. With four plates?

Senator SMOOT. And that you had four subjects on a plate.

Mr. RALPH. Senator, allow me to correct you. A power press is a quadrangular press. There is a plank in each corner of the press. A plank will accommodate one plate, and in the test we made here we only used one plate on one plank; but if we had the full equipment on the press we would have had four plates on it; consequently we would have printed four times as many as we did.

Senator SMOOT. I recognize that. What I was getting at was not what you did do, but what you could do, providing we had authority to make a run on the power press. Do you know how many impressions a power press can make in an hour?

Mr. RANDALL. Well, that press had a speed of about 14 a minute that day.

Senator SMOOT. That is, if it were running regular.

Senator FLETCHER. How many plates has the hand press?

Senator SMOOT. How many impressions could be made by a hand press?

Mr. RANDALL. Well, some men take 30 minutes to do 100; some will take 40 minutes; and some will do a hundred in 25 minutes.

Senator SMOOT. It depends upon the skill of the workman?

Mr. RALPH. What will the average printer do?

Mr. RANDALL. Well, the average is about a thousand per day; eleven hundred, perhaps.

Senator SMOOT. On a power press what would be the average?

Mr. RANDALL. You are speaking of notes?

Senator SMOOT. Yes.

Mr. RANDALL. Well, that would have to be found out, because we have never printed any.

Senator SMOOT. From your experience in printing on a power press, on the beer stamp and the postage stamp, what do you think the number would be?

Mr. RANDALL. Oh, it ought to run between three and four thousand.

The CHAIRMAN. Are these 40 notes the only ones that have been printed?

Mr. RANDALL. Yes, sir.

Senator FLETCHER. Has a hand press the same number of plates that a power press has?

Mr. RANDALL. A man on a hand press only handles one plate at a time.

Cross-examination by Mr. RALSTON:

Mr. RALSTON. I want to ask you a few questions: Is it not a fact that during the course of an hour, even an average hand pressman will print at least 120 impressions?

Mr. RANDALL. You mean on a hand press?

Mr. RALSTON. I mean a good average pressman.

Mr. RALPH. I think that would be about the average.

Mr. RALSTON. That would be about the average, would it? Now, in the 35 minutes used in producing these 40 specimens, a hand pressman could have printed 70, could he not?

Mr. RANDALL. According to that—

Mr. RALSTON. He could have printed 70 by hand in the time you were printing 40 by the machine. Is that not about correct?

Mr. RANDALL. That is the way you have it.

Mr. RALSTON. What was the occasion for the delay in your printing?

Mr. RANDALL. I think Mr. Ralph spoke of that. There was only one plate on the press. We had to wait every time for it to come around. If we had four plates on we would multiply that by four.

Mr. RALSTON. Well, assuming that to be true, if there had been four plates there, instead of printing 40 you would have printed 160—a little over twice as much as a hand pressman would have printed. Is not that true?

Mr. RANDALL. Yes, sir.

Mr. RALSTON. That would have been, then, at the rate of 2,200 to 2,500 a day, would it not?

Mr. RANDALL. That would be; yes.

Mr. RALSTON. And that would be in the neighborhood of half as fast as a steam press ordinarily is expected to do?

Mr. RANDALL. Yes; but again you are losing sight of the fact that all that time we were adjusting pressure. We could not start that job right off with the pressure and go on ahead.

Mr. RALSTON. I understood Mr. McKinney to say that you did not adjust the pressure at all.

Mr. RANDALL. I adjusted the pressure; I was there.

Mr. RALSTON. I understood the machine was ready to go right off.

Mr. RANDALL. The machine had new blankets, and you have to get the pressure properly.

Mr. RALSTON. Why did you take new blankets for that purpose?

Mr. RANDALL. We had not any others to take; that is a small job, and we had to put in what we had.

Mr. RALSTON. You took new blankets because you would get better results than from the use of old blankets, did you not?

Mr. RANDALL. Not at all; I did not select them for that reason. I selected them because they were using this kind on the hand presses. We did not have any of those in our room.

Mr. RALSTON. Without considering the reason, you can, can you not, get better results from new blankets than from old?

Mr. RANDALL. Well, it is generally supposed that is so; but you can not put in new blankets every day.

Senator SMOOT. Nor is it necessary.

Mr. RANDALL. No, sir; it is not necessary.

Mr. RALSTON. Now, you do not know anything about the printing of the hand presses?

Mr. RANDALL. Well, I have not been up there in 18 years.

Mr. RALSTON. I understood you to say that you could start a job on a steam press in half an hour.

Mr. RANDALL. I have; yes, sir.

Mr. RALSTON. You had made, had you not, practically all the adjustments before the press was set in motion?

Mr. RANDALL. No, sir. You see, it is like this: A man is printing a 1-cent ordinary stamp and he finishes it and he wants to start a 2-cent stamp. All we have to do is clean the fountain and put in a roller. There is no other adjustment to it. I have done it in about 25 minutes.

Mr. RALSTON. You say that the ink was put in?

Mr. RANDALL. Cleaned the fountain out—the color of the ink and the roller. That is all that was necessary.

Mr. RALSTON. You put in the ink that you thought would give the best results, did you not?

Mr. RANDALL. I put in ink they used upstairs, for the simple reason we had never printed them before.

Mr. RALSTON. You did not use the ordinary power-press ink?

Mr. RANDALL. No.

Mr. RALSTON. The ordinary power-press ink flows more freely, does it not?

Mr. RANDALL. Yes, sir.

Mr. RALSTON. So that the result that you got was not, so far as the ink is concerned, identical with the result you would ordinarily expect from power-press printing; is that true?

Mr. RANDALL. Well, I think that if I had put it half and half, I would have got even better results. That is my opinion, that is all.

Mr. RALSTON. Then, so far as the ink was concerned, you did not use power-press ink—

Mr. RANDALL. Not a drop.

Mr. RALSTON. On that printing of the faces which have been exhibited to the committee as power-press production?

Mr. RANDALL. Not a drop.

Senator SMOOT. If you wanted to print at any time, you could use whatever ink you wanted to; you could mix both hand and power press ink?

Mr. RANDALL. Yes, sir.

Mr. RALSTON. Is it not true, because of the great speed of the steam press, that you find it necessary to use a lighter ink and an ink that will flow more readily?

Mr. RANDALL. Well, I do not think the feed has anything to do with that.

Mr. RALSTON. It has something to do with it, has it not?

Mr. RANDALL. Years ago they always had an ink a little softer. We did not use any in this case.

Mr. RALSTON. How do you account for that?

Mr. RANDALL. If the ink is too thick, it thickens up in the fountain; works around in the roller and gets thick like sawdust.

Mr. RALSTON. Is not that the case when there is a great call upon the fountain for ink as there is in the steam press?

Mr. RANDALL. The fountain is running right straight along all the time.

Mr. RALSTON. It is simply true that the ink clogs up largely for want of proper cleaning.

Mr. RANDALL. A printer is supposed to clean his fountain when he finds it necessary. A good printer does that without being told.

Mr. RALSTON. You said awhile ago that you were surprised at the excellent results that you obtained from this plate upon a power press?

Mr. RANDALL. Yes.

Mr. RALSTON. Why were you surprised?

Mr. RANDALL. Because of the little time it took to start. They ought to have given me two or three days to start that job.

Senator SMOOT. Could you have done a better job if you had run 100,000 of those notes?

Mr. RANDALL. I am almost sure of that; yes, sir.

Mr. RALSTON. Was that the only ground for your surprise?

Mr. RANDALL. It was, because we did not have time really to get as good an impression.

Mr. RALSTON. Did you get as good an impression as you would expect ordinarily to get from power-press work?

Mr. RANDALL. It was a good impression, to my mind. It looked all right to me.

Senator FLETCHER. When you use the word "impression," does that include the completion of the bill—both sides?

Mr. RANDALL. No; it means one side.

Senator FLETCHER. One side?

Senator SMOOT. Each side is an impression.

Senator FLETCHER. Each side is an impression, is it?

The CHAIRMAN. Is the entire bill printed at one impression?

Senator SMOOT. No.

Mr. RALSTON. Did I understand you to say, or have I a right to infer from what you said, that you consider the work done by four-fifths of the printers engaged on this work as inferior?

Mr. RANDALL. I did not say on this work. I said four-fifths of the force. I did not say this work particularly.

Mr. RALSTON. Then your remark was more sweeping—that about one-fifth excelled?

Senator SMOOT. Mr. Ralston, can you go right on with your witness to-night?

Mr. RALSTON. I think the suggestion was made, Senator, while you were out, that Mr. Poole was present, and I understood Mr. Ralph to say that he would call him.

Mr. RALPH. Nothing further has been developed here about the operation of the press, Mr. Chairman.

Mr. RALSTON. Mr. Poole's testimony, in a rather irregular way, was offered to the committee at the last meeting.

Mr. RALPH. There was nothing irregular about it, Mr. Chairman. I object to the charge of its being irregular.

Mr. RALSTON. I did not use it in any offensive way; I am speaking merely from a legal point of view.

Senator SMOOT. Mr. Ralston, you objected to that, and the committee felt inclined to yield to your objection and did so.

Mr. RALPH. I will call Mr. Poole at the next session.

Senator SMOOT. Had you not better go on, Mr. Ralston?

Mr. RALSTON. Well, I will call Mr. Poole now.

Senator SMOOT. You will call him as your witness?

Mr. RALSTON. Yes.

#### TESTIMONY OF MR. J. A. POOLE, PLATE PRINTER.

Mr. J. A. POOLE, having been duly sworn by the chairman, was examined by the committee and testified as follows:

Direct examination by Mr. RALSTON:

Mr. RALSTON. Mr. Poole, will you state your business, please?

Mr. POOLE. I am a plate printer.

Mr. RALSTON. How long have you been a plate printer?



Mr. POOLE. About 28 or 29 years.

Mr. RALSTON. How long have you been employed in the Bureau of Printing and Engraving?

Mr. POOLE. About 17 years.

Mr. RALSTON. And during that time have you been engaged, if at all, in printing faces—facing work?

Mr. POOLE. Well, not very much; very little.

Mr. RALSTON. Very little?

Mr. POOLE. Very little.

Mr. RALSTON. Just specify what you mean by little. Give us an idea of your experience.

Mr. POOLE. Well, perhaps a couple of months, I might say; that is about all.

Mr. RALSTON. Was that all at one time?

Mr. POOLE. At different times; a day now and again.

Mr. RALSTON. You do not mean to say that you are employed consecutively for that length of time?

Mr. POOLE. No, sir.

Mr. RALSTON. On what classes of work have you been engaged?

Mr. POOLE. In the bureau?

Mr. RALSTON. Yes.

Mr. POOLE. Both the stamp work and all kinds pretty much.

Mr. RALSTON. Of late, what kind of work have you been employed on?

Mr. POOLE. Oh, I have been on postage stamps lately; and I was on the postal-savings cards a short while ago.

Mr. RALSTON. Have you done any hand work of late?

Mr. POOLE. Yes, sir; I did two or three days' work last month, or the month before.

Mr. RALSTON. And what was that on?

Mr. POOLE. Faces.

Mr. RALSTON. Was it the regular run of work in the bureau or on special work?

Mr. POOLE. I think they were on one of the silver faces. Yes; the regular work of the bureau.

Mr. RALSTON. Is that the only hand work you have done of late?

Mr. POOLE. Yes, sir; that is all. I get a day now and again, you know. Those are the last two or three days.

Senator SMOOT. You are a power-press man, are you?

Mr. POOLE. I am at the present time. I learned my trade on a hand press.

Mr. RALSTON. How long have you been a power-press man?

Mr. POOLE. I have been on a power press for about 16 years.

Mr. RALSTON. For the past 16 years?

Mr. POOLE. About that; yes, sir.

Mr. RALSTON. Mr. Poole, did you about a year ago, I think it was, print some faces for Mr. Ralph?

Mr. POOLE. I did.

Mr. RALSTON. On the hand press or on the power press?

Mr. POOLE. On the power press.

Mr. RALSTON. Who made ready for that?

Mr. POOLE. Mr. Randall had it made ready. I do not know who made it ready.

Mr. RALSTON. You did not take part in that?

Mr. POOLE. No, sir.

Mr. RALSTON. The press was ready when you were called upon to print?

Mr. POOLE. It was.

Mr. RALSTON. Do you remember how many subjects there were on a plate?

Mr. POOLE. One.

Mr. RALSTON. And how many plates were engraved?

Mr. POOLE. One. How many plates on a press you mean?

Mr. RALSTON. Yes; engraved on a plate?

Mr. POOLE. One.

Mr. RALSTON. Do you know anything of the condition of that plate? That is to say, was it a perfectly new plate or otherwise?

Mr. POOLE. Yes, sir; I think it was a new plate.

Mr. RALSTON. Do you know where the plate came from. Did it come directly from the engraver's room?

Mr. POOLE. I do not know, sir.

Mr. RALSTON. Your impression is that it was a new plate?

Mr. POOLE. It looked like a new plate to me.

Senator FLETCHER. You mean it never had been used before?

Mr. POOLE. It did not look to me like it had been used before. I do not know in regard to that.

Mr. RALSTON. Now, Mr. Poole, how many impressions did you make at that time?

Mr. POOLE. Forty, I believe.

Mr. RALSTON. Do you recollect how long a time it took you to print the 40?

Mr. POOLE. No; I would guess about 30 minutes—thereabouts.

Mr. RALSTON. And did the press run continuously all that time?

Mr. POOLE. No, sir.

Mr. RALSTON. What interfered with its running, or why was it stopped?

Mr. POOLE. Well, the ink came out too thick and I had to stop and wipe it off.

Mr. RALSTON. You wiped the ink off the plate?

Mr. POOLE. Yes, sir.

Mr. RALSTON. Did you wipe the engraving itself?

Mr. POOLE. I wiped all the surplus ink off the plate that was on.

Mr. RALSTON. You went over the plate itself?

Mr. POOLE. Yes, sir.

Mr. RALSTON. You went over the plate after it had passed under the wiper, did you not?

Mr. POOLE. Yes, sir.

Mr. RALSTON. And did you, in concluding the wiping, wipe that plate as you would have wiped a plate on a hand press?

Mr. POOLE. Well, I wiped it; yes; just wiped it ordinarily.

Mr. RALSTON. What do you mean by ordinarily? As if you had been doing hand-press printing?

Mr. POOLE. I wiped that plate from top to bottom when it came through that way. From bottom to top.

Mr. RALSTON. Did you wipe it for every impression?

Mr. POOLE. There may have been one that I did not wipe it for; but to the best of my recollection, all of them.

Mr. RALSTON. Then you had to give it a hand wiping. Did you stop the press that time?

Mr. POOLE. Yes, sir. Now, hold on. Perhaps I printed one without stopping that press.

Mr. RALSTON. Not more than that, you think?

Mr. POOLE. No; I don't think so.

Mr. RALSTON. And in addition to the wiping, did you polish it?

Mr. POOLE. I did.

Senator SMOOT. You do that always, do you not, on a power press?

Mr. POOLE. Yes, sir.

Senator SMOOT. If you are printing regular stock, you would polish it?

Mr. POOLE. Yes, sir.

Mr. RALSTON. Can you control the rate of speed of your press without stopping it?

Mr. POOLE. Not my press; no, sir.

Mr. RALSTON. I mean the press on which these examples were printed.

Mr. POOLE. Yes; I think you can.

Mr. RALSTON. Did you slow it up during the process of printing?

Mr. POOLE. Only when I stopped it.

Mr. RALSTON. Did you have occasion to change the blanket at all during the printing?

Mr. POOLE. No, sir.

Mr. RALSTON. Did you have occasion while these 40 specimens were being printed to make any adjustments at all?

Mr. POOLE. No, sir.

Mr. RALSTON. So that the press and the flow of ink, if I understand you, when you concluded the printing was in the same condition as at the beginning?

Mr. POOLE. Well, if there was any change, I could not say positively. That ink may have been off a little from the fountain. The ink was coming a little too freely, but I would not like to swear to that statement.

Mr. RALSTON. But, as I understand you, you had to wipe it in every case except one?

Mr. POOLE. Every one except one.

Mr. RALSTON. What kind of packing did you have under the plate?

Mr. POOLE. I could not say. I did not put the packing in.

Mr. RALSTON. You did not know, then, whether the hand-press packing was used at all?

Mr. POOLE. I did not.

Mr. RALSTON. Ordinarily, in your steam-press printing, do you use the same packing that is used in hand-press printing—packing under the plate?

Mr. POOLE. Oh, yes; we use packing under the plate.

Mr. RALSTON. I mean the same kind?

Mr. POOLE. Under the hand press we use a zinc. We use what I call leather board.

Mr. RALSTON. Mr. Poole, have you at any time signed any statement about the circumstances under which this printing took place?

Mr. POOLE. No, sir.

Mr. RALSTON. Have you, so far as you know, ever made any statement?

Mr. POOLE. In regard to these sheets?

Mr. RALSTON. Any formal statement?

Mr. POOLE. Yes, sir.

Mr. RALSTON. When was that?

Mr. POOLE. Last Saturday.

Mr. RALSTON. Who was there? Where did that take place?

Mr. POOLE. In Mr. Ralph's office.

Mr. RALSTON. Do you know whether that was taken down stenographically or not?

Mr. POOLE. I believe it was.

Mr. RALSTON. Did you at that time know it?

Mr. POOLE. No, sir.

Mr. RALSTON. It was taken down stenographically without your knowledge?

Mr. POOLE. Yes, sir.

Mr. RALSTON. You never made any statement on this subject to me, did you?

Mr. POOLE. To you? No, sir. I never have seen you before that I know of.

Senator FLETCHER. You have heard the testimony of these other witnesses here as to the difference in the amount of work and the difference in the pay of the men operating the hand presses and the power presses. Do you agree with the men operating the power press that they earn and receive more pay than those operating the hand presses and that the work on the power presses is lighter on the men than the work on the hand presses?

Mr. POOLE. I know that I get paid better on the steam press than I do on the hand press. I do not know how the other gentlemen make out. I do not know how fast they are on the hand presses, and I know that the work is less laborious on the steam press than on the hand press.

Cross-examination by Mr. RALPH:

Mr. RALPH. Mr. Poole, what is your average on the hand press?

Mr. POOLE. Well, I could not state, Mr. Ralph. It is a great many years since I have been on the hand press, except now and then.

Mr. RALPH. You went on the power press in 1896. Previous to that what was your average on the hand press?

Mr. POOLE. I could not tell you.

Mr. RALPH. The records of the bureau show it to be \$4.01.

Mr. POOLE. Yes, sir.

Mr. RALPH. What is your average on the power press?

Mr. POOLE. Somewhere in the neighborhood of \$9.

Mr. RALPH. \$9.89.

Mr. POOLE. Yes.

Mr. RALPH. Now, Mr. Poole, in the interview I had with you in my office, did I ask you any questions you refused to answer?

Mr. POOLE. You did not.

Mr. RALPH. Did I ask you any questions you had any hesitancy in answering?

Mr. POOLE. No, sir.

Mr. RALPH. And the mere fact that you did not see a stenographer sitting at the table would not indicate that a stenographer was not present?

Mr. POOLE. I did not say you hid a stenographer.

Mr. RALPH. You have no objection to repeating the statement you made to me, have you?

Mr. POOLE. No, sir.

Senator SMOOT. If Mr. Ralston had asked you any questions about the printing of those bills before you entered this room, you would have answered him just as quickly as you did Mr. Ralph's, would you not?

Mr. POOLE. I suppose so.

Senator SMOOT. You would have no objection to doing that?

Mr. POOLE. No objection; no, sir.

Senator SMOOT. You had no objection to making the same statement to Mr. Ralston that you did to anyone else?

Mr. POOLE. No, sir; no objection whatever.

Senator SMOOT. Did you have any information in advance that you were going to print the currency that you did print?

Mr. POOLE. No, sir.

Senator SMOOT. Do you remember who were present when that job was printed?

Mr. POOLE. I do.

Senator SMOOT. Will you name them?

Mr. POOLE. Mr. Ferguson, Mr. Randall, Mr. McKinney, Mr. Foster, and myself.

Senator SMOOT. Did you have any conferences with anybody about the printing job before the plate was put on the press?

Mr. POOLE. No, sir.

Senator SMOOT. Did you know anything about it?

Mr. POOLE. No, sir.

Senator SMOOT. At the time it was ordered on the press did you know who it was for?

Mr. POOLE. I did not. Now listen, Mr. Senator, I did not know what that job was until I went out and printed it. I went out and went on it. I did not see it or anything.

Senator SMOOT. Did Mr. Randall or anybody else ask you to favor the job?

Mr. POOLE. No, sir.

Senator SMOOT. Did you have any instructions about favoring the press or preparing the press for the job?

Mr. POOLE. No, sir; I did not prepare the press.

Senator SMOOT. Who prepared the press?

Mr. POOLE. Mr. Randall had it prepared; I do not know who prepared it.

Senator SMOOT. Ordinarily, when you take a job like that, something that requires care, like the printing of the face of a note, you would take considerable time in making ready for the job, would you not?

Mr. POOLE. Yes, sir.

Senator SMOOT. Mr. Poole, how much time does it take to make ready for a job; particularly one you never printed before?

Mr. POOLE. That would be a rather hard question to answer, I should think. One job might start right off, and another job might

take you a day or something like that. It might take even more than that. I should think ~~from~~ two to three hours would be a fair average.

Senator SMOOT. You think that would be a fair estimate?

Mr. POOLE. I think so; yes, sir.

Senator SMOOT. What time did you consume in preparing and making the presses ready for the notes?

Mr. POOLE. I did not make them ready.

Senator SMOOT. You did not?

Mr. POOLE. No, sir.

Senator SMOOT. The work of printing the job was not favored or slighted by you in any way?

Mr. POOLE. No, sir.

Senator SMOOT. At any time during the printing of the notes you did not have to change the press in any way, did you?

Mr. POOLE. No, sir; I did not. Mr. Randall put pressure on.

Mr. RALPH. Mr. Poole, while you had no knowledge what this plate was to be used for, in your mind did you not formulate an idea of what it was to be used for?

Mr. POOLE. Of course, when I went out there and saw Mr. Foster and all the other gentlemen there I surmised what it was for.

Mr. RALPH. Did you have a conversation with Mr. Foster?

Mr. POOLE. None whatever.

Mr. RALPH. In starting a new job it is not an unusual thing for you to be compelled to wipe off some of the surplus ink on the plate, due to the fact that you have not got your wiper properly adjusted?

Mr. POOLE. Very often that is the case.

Mr. RALPH. You have a rag there for that purpose, do you not?

Mr. POOLE. Yes, sir.

Mr. RALPH. Did not you have knowledge that this plate was printed in the engraving division before it came down to you?

Mr. POOLE. No, sir.

Mr. RALPH. It was not necessary for you to have that, was it? Didn't you start up a job for me on postal savings cards?

Mr. POOLE. Yes, sir.

Mr. RALPH. It was a new job?

Mr. POOLE. Yes, sir.

Mr. RALPH. And on new paper?

Mr. POOLE. We had not printed on any such heavy paper before.

Mr. RALPH. How long did it take you to start that job?

Mr. POOLE. I do not think we ever did get it started very good. We tried.

Mr. RALPH. How long did you experiment in trying to get that right?

Mr. POOLE. I do not know. We were some time on that.

Mr. RALPH. Was it a week or 10 days?

Mr. POOLE. It was more than that.

Mr. RALPH. You used all your ingenuity as a printer to make a success of the job, did you not?

Mr. POOLE. I certainly did.

Mr. RALPH. And you consulted other expert men on it?

Mr. POOLE. I did everything I could to make it go.

Mr. RALPH. After we wet the paper down we had trouble?

Mr. POOLE. Yes.

Mr. RALPH. You had to use a rag frequently?

Mr. POOLE. I had to use the rag some; yes.

Mr. RALPH. For every impression?

Mr. POOLE. I could not say.

Mr. RALPH. Did you not have to wipe the ink out and sometimes ink it in by hand because it dried on the plate?

Mr. POOLE. No, sir.

Mr. RALPH. Now, then, Mr. Poole, no official of the bureau ever gave you the impression that your testifying freely and to the facts as you find them would be displeasing?

Mr. POOLE. No, sir.

Mr. RALPH. You do not believe it would?

Mr. POOLE. Well, I hope not.

Mr. RALPH. You do not believe it would?

Mr. POOLE. I do not think it would.

Mr. RALPH. You would express yourself just as freely in my office as you would before this committee, would you not?

Mr. POOLE. I will tell the truth.

Mr. RALPH. That is all, Mr. Chairman.

Senator SMITH. Mr. Poole, in the preparation for this work, was there or not a greater number of experts engaged in the work than usual?

Mr. POOLE. I do not know what you call an expert.

Senator SMITH. Well, your best men. Do you always have the men to start up a job of this kind that were there then?

Mr. POOLE. That is the first job we have had of that kind. Mr. Randall and Mr. McKinney were there. I do not think Mr. McKinney had a word to say. Mr. Randall was my foreman and the only expert beside Mr. McKinney.

Senator SMITH. I was only asking the question because I notice that the heads of your department were all there, and I wanted to know whether or not that is usual in starting a power press.

Mr. POOLE. I suppose it was a new job and they were interested; and that is all.

Senator SMOOT. Evidently, Mr. Chairman, Mr. Ralston is not prepared to go on with his witnesses. I would like to ask Mr. Ralston if he could be here at 10.45 to-morrow?

Mr. RALSTON. I can, if the committee so desires.

Senator SMOOT. Then I move that we adjourn until 10.45 to-morrow.

Thereupon, at 6 o'clock p. m., the committee adjourned until 10.45 to-morrow, Saturday, February 3, 1912.

SATURDAY, FEBRUARY 3, 1912.

UNITED STATES SENATE,  
COMMITTEE ON PRINTING,  
*Washington, D. C.*

The committee met at 10.45 o'clock a. m.

Present: Senators Richardson (chairman), Smoot, Gallinger, and Page.

Senator SMOOT. Chairman Richardson has just sent me word to go on. He will be here in a short time.

Mr. RALSTON, I believe you gave a list of witnesses you wanted to be summoned here, and that has been attended to, and the first one named is G. F. C. Smillie.

Mr. RALSTON. Is Mr. Smillie present?

Mr. Smillie thereupon took the witness stand.

Mr. RALPH. Senator, I would call attention to the fact that Mr. Smillie is a little difficult of hearing; therefore it would assist him to speak loudly.

## TESTIMONY OF G. F. C. SMILLIE.

Mr. G. F. C. SMILLIE having been duly sworn, was examined by the committee, and testified as follows:

Direct examination by Mr. RALSTON:

Mr. RALSTON. Mr. Smillie, will you state your occupation, if you please?

Mr. SMILLIE. Picture engraver.

Mr. RALSTON. How long have you followed that occupation?

Mr. SMILLIE. Forty years.

Mr. RALSTON. Will you not state to the committee in what places and offices you have had experience as a picture engraver?

Mr. SMILLIE. With the American Bank Note Co. in New York; Homer Lee Bank Note Co.; the Hamilton Bank Note Co., and the Bureau of Engraving and Printing.

Mr. RALSTON. Where were you first engaged as a picture engraver?

Mr. SMILLIE. The American Bank Note Co.

Mr. RALSTON. How long ago was that?

Mr. SMILLIE. Forty years ago.

Mr. RALSTON. How many years have you been in the Bureau of Engraving and Printing?

Mr. SMILLIE. It will be 18 years in March.

Mr. RALSTON. Will you state, please, what is understood by the expression you have used "picture engraver"—what classes of engraving are embraced under that term?

Mr. SMILLIE. Principally portraits and figure work, that is to say, the human figure.

Mr. RALSTON. Have you been engaged in doing that work for the currency?

Mr. SMILLIE. Yes.



Mr. RALSTON. Were you engaged in the same class of work in the American Bank Note Co.?

Mr. SMILLIE. Yes, sir.

Mr. RALSTON. How many picture engravers, as you express the term, are there employed in the Bureau of Engraving and Printing?

Mr. SMILLIE. Four besides myself, I think.

Mr. RALSTON. Will you give their names?

Mr. SMILLIE. Well, besides myself, I think, there is Mr. Baldwin, Mr. Ponickan, Mr. Charlton, Mr. Chalmers, Mr. Eissler.

Mr. RALPH. How about Schofield?

Mr. SMILLIE. Schofield—I beg your pardon.

Mr. RALSTON. You are acquainted then, of course, with the whole subject of steel or copperplate engraving, are you not?

Mr. SMILLIE. It is reasonable to suppose that after 40 years' experience I am.

Mr. RALSTON. Will you please state what are the particular attributes of a high-class steel or copperplate engraving—picture engraving, if you will.

Mr. SMILLIE. I do not know that I rightly understand your question. Do you mean what constitutes the highest class of engraving?

Mr. RALSTON. Yes. What are the peculiarities of the engraving; to what do you give attention to secure the highest class result?

Mr. SMILLIE. Textures, tones, and effects.

Mr. RALSTON. By texture you mean what?

Mr. SMILLIE. By texture I mean the different qualities of line and dot that interpret texture and color, because some attention is given to what the color would be in nature.

Mr. RALSTON. And what do you understand by "tone"?

Mr. SMILLIE. By what?

Mr. RALSTON. Tone.

Mr. SMILLIE. Tone is the tints, shades, and gradations.

Mr. RALSTON. And do you give any special meaning to the word "effect"?

Mr. SMILLIE. Yes; contrasts of light and shade.

Mr. RALSTON. Now, how do you get the tone and effect; for instance, do you employ lines of different depth?

Mr. SMILLIE. Yes; that pertains more especially to texture. But, of course, the tones are gotten by the varying degrees of depth and width.

At this point Senator Richardson took the chair.

Mr. RALSTON. Will you please explain how the effect of the depth of the line in the engraving is reproduced in the printing? Is the ink deposited from the deep line—deeply engraved line—upon the paper?

Mr. SMILLIE. Yes, sir. The paper is crushed up against that line and brings away with it a little fill-up, if you please, of ink.

Mr. RALSTON. In the engravings of high character are the lines wide and deep, relatively, or are they the opposite?

Mr. SMILLIE. Well—

Mr. RALSTON. As contrasted with what you would consider poor engravings?

Mr. SMILLIE. It would turn more upon the inequalities and irregularities in width and what you would call the blend of line, the graceful blending of the directions of line. There is a consideration for

the surface of the subject, and these lines are made to describe that surface by direction; and then in the crossings, one thing and another like that at the side and interplay, that the lines by themselves are graceful and harmonious—what we call “harmony of line.”

Mr. RALSTON. Suppose that, for the purpose of producing a given effect, lines are made to have a certain depth and width. What will be the result of deepening and still more broadening those lines? What will be the effect upon the produced engraving?

Mr. SMILLIE. It does not follow that because the lines are wide apart that they have to be deep. Sometimes a very light line is put wide apart and sometimes we put a deep line wide apart, depending upon the effect desired. For instance, upon a coat there [indicating on picture engraving] the lines are wide and they are deep, you see; and then you will find upon the face some of the lines that are widest, and not only wide, but the line is broken and the dots are small and light.

Senator SMOOT. Is that for the purpose of shading?

Mr. SMILLIE. That is for shading and texture.

Mr. RALSTON. Suppose we take this engraving, if you will, for example. Having made the lines in the plate of a certain depth and width, those lines are afterwards deepened and widened—those same lines. What will the effect be upon the original engraving as shown by the produced engraving?

Mr. SMILLIE. It will make it very much larger and measurably change the texture.

Senator SMOOT. Will it or not injure the effect of the engraving as such?

Mr. SMILLIE. Of course, it lacks the delicacy; it is bound to.

Mr. RALSTON. Mr. Smillie, were you employed with the American Bank Note Co. at the time when the work was universally done on the hand press?

Mr. SMILLIE. Yes, sir.

Mr. RALSTON. And were you ever employed there at a time when part or all of the work was placed upon power presses?

Mr. SMILLIE. I think they only did stamps—not for the United States Government. I guess that answers the whole question.

Mr. RALSTON. You are familiar, however, are you not, that at the present time the larger amount of work, or nearly all the work, at the American Bank Note Co. is done on power presses?

Mr. SMILLIE. I have been told so.

Mr. RALSTON. I wish you would state whether there is any difference, perceptibly, in the character of engraving that was formerly done when the hand press was used and that which is done now under the steam press, or power press.

Mr. SMILLIE. You mean the American Bank Note Co.?

Mr. RALSTON. Yes.

Mr. SMILLIE. I have a very limited knowledge of what they have done. I have seen the Canadian currency, and that is materially wider and coarser and grosser all the way through, but that was only one single subject, and they do an immense amount of work outside of that. On the other hand, a stock certificate came into my hand, and on that was one of the old vignettes with some fine work. I do not know whether that was printed on the steamer or by hand, so that I can not answer. I know that the Canadian notes, or at

least I have been told that the Canadian notes, were done on the steamer.

Mr. RALSTON. Were they produced of late years, do you know?

Mr. SMILLIE. Yes, sir.

Mr. RALSTON. The notes that you have in mind—what would you say of the character of the engraving upon those notes, as contrasted with the engraving of different subjects when the hand press was employed exclusively in the American Bank Note Co.?

Mr. SMILLIE. Do you mean whether—

Mr. RALSTON. Whether the old standard of engraving has or has not been preserved?

Mr. SMILLIE. I do not think it has in those notes I have seen.

Senator SMOOT. Do you speak now of the Canadian notes?

Mr. SMILLIE. Those few Canadian notes; I have seen only some four or five of them.

Senator SMOOT. That is, you think that the Canadian notes that were printed years ago upon a hand press was a better note than the one that is printed to-day upon the power press?

Mr. SMILLIE. Are you speaking of the printing or the engraving?

Senator SMOOT. Of the engraving, or the note itself.

Mr. SMILLIE. The old notes were superior—materially superior.

Senator SMOOT. Were they printed by the same company?

Mr. SMILLIE. They were printed by hand.

Senator SMOOT. I say by the same company?

Mr. SMILLIE. No. The British American.

Senator SMOOT. They were not printed by the same company?

Mr. SMILLIE. By the American Bank Note Co.? No.

Senator SMOOT. That is what I wanted.

Mr. RALSTON. In what respects do you class the old notes as superior?

Mr. SMILLIE. In the character of the engraving. They were better in all particulars that I have spoken of as possibly being good engravings. These Canadian notes look gray.

Mr. RALSTON. I exhibit to you a couple of specimens of Canadian notes and ask you in what respect you would criticize them [handing several engraved notes to the witness]?

Mr. SMILLIE. In the first place they are gray; it loses the quality that a plate should give.

Senator SMOOT. That is from the color?

Mr. SMILLIE. The weight of color; that is what I am speaking of. The first thing that strikes you is the grayness of the note. Now, a plate is supposed to give you such a range of color all the way through absolute black, where the full body is taken out of a heavy line, but in that it is gray; it looks like surface work.

Senator SMOOT. That is not on account of the press; that is on account of the ink, of the color.

Mr. SMILLIE. I do not know what it is, whether it is the ink it is printed in or the way it is printed. It would seem as though a very much stronger effect could have been gotten from that plate if another ink or some other method of printing had been pursued.

Senator SMOOT. Or, in other words, the color is dull.

Mr. SMILLIE. It is gray.

Senator SMOOT. That is on account of the ink?

Mr. SMILLIE. It may be; I do not know.

Mr. RALSTON. I understood the witness to say a better result could have been obtained by another kind of ink, or another method of printing—coupling the two.

Mr. SMILLIE. Yes; those notes—now, they look gray. You contrast those with the notes you are printing to-day at the bureau and I think—

Senator SMOOT. One of our notes that was printed at the bureau on a power press—contrast it with that.

Mr. SMILLIE. I have not seen those.

Senator SMOOT. Would you like to see one and contrast it with it?

Mr. SMILLIE. Yes.

Senator SMOOT. Get one and show him.

Thereupon several notes were handed to the witness for inspection.

Senator SMOOT. There are 15 notes, some printed upon hand press and some upon power press. Is that same thing or complaint you make in these notes; can you make them in those notes?

The witness thereupon examined several \$1 notes.

Mr. SMILLIE. Certainly not. You see the difference in a moment.

Senator SMOOT. Certainly; no matter whether these were printed upon power press or not, they are notes entirely different.

Mr. SMILLIE. Yes; different in the character of the engraving, too.

Senator SMOOT. Different in the character of engraving and different in the character of the ink as well; is not that so?

Mr. SMILLIE. It looks gray. Whether it is from the ink or from the printing, I can not determine that—that is something I can not tell.

Senator SMOOT. They are entirely different from our own, though?

Mr. SMILLIE. Yes, sir; they are.

Mr. RALSTON. Mr. Smillie, are you familiar enough to know the difference in the inks required on the power and hand presses?

Mr. SMILLIE. I am not. I have not anything to do with the printing.

Mr. RALSTON. In the specimens that have just been exhibited to you of notes printed at the bureau, do you know whether the steam-press notes among them were printed with hand press?

Mr. SMILLIE. I have not any knowledge whatever regarding it.

Mr. RALSTON. Or whether they were printed under hand-press conditions, although the power was applied by power press?

Mr. SMILLIE. I know nothing whatever about it.

Mr. RALSTON. Do those Canadian notes exhibited to you present what is termed a flat appearance?

Mr. SMILLIE. Yes; that is the complaint—that is the objection.

Mr. RALSTON. What do you mean, in detail, by "flat" appearance?

Mr. SMILLIE. Lacking contrast—that is the difference.

Mr. RALSTON. You are exhibiting to me a couple of vignettes which I suppose were printed on a hand press, were they not, and contrasting them with Canadian notes?

Mr. SMILLIE. I guess there were; I do not think there is any doubt about that. You see the difference in the range of color that runs from absolute black all the way through to white.

Senator SMOOT. Just the same as our notes?

Mr. SMILLIE. Yes.

Senator SMOOT. Show the same contrast?

Mr. SMILLIE. That is a fair contrast, too, for a reason.

Mr. RALSTON. I would like to show you some specimens which were exhibited to the committee yesterday of revenue stamps [to Mr. Ralph], if you have them here.

Mr. RALPH. Yes, sir.

Thereupon Mr. Ralph exhibited to the witness a book containing samples of revenue stamps.

Mr. RALSTON. Fifties cigars was one we looked at yesterday. [Speaking to the witness.] I wish you would contrast the engraving and the general character of the design of the fifties cigars stamps. I understand that these upon the left-hand page were used on the hand press.

Mr. RALPH. And the power press as well.

Mr. RALSTON. Perhaps to a small extent upon the power press.

Mr. RALPH. For a great many months.

Mr. RALSTON. And the right hand page was used afterwards on the power press. [To the witness.] I wish you would contrast those engravings of the two—the general character of the engraving—and make such comments as seem to you appropriate.

Mr. SMILLIE. They are two different engravings.

Mr. RALPH. Both printed on hand press—die proofs they are.

Mr. RALSTON. I understand this: That the power press is at the present time and has almost from the beginning been printing the stamps shown on the right-hand page; that for a short time the power press, following the hand press, used those on the left-hand page. [To the witness.] I wish you would contrast the two kinds of engravings as to their excellence from an engraver's standpoint.

Mr. SMILLIE. They are of different engravings—different plates.

Mr. RALPH. For the information of Mr. Smillie and the committee, the 50's cigar stamps were first transferred to the power press. This design here [indicating]—this stamp—on May, 1907—I know the design was transferred to the power presses early in 1910.

Senator SMOOT. Do I understand they were both printed on power presses?

Mr. RALPH. Yes; printed on power presses for almost two years.

Senator SMOOT. These for how long?

Mr. RALPH. Since 1910.

Mr. RALSTON. The design has been changed.

Mr. SMILLIE. That is a different design.

Senator SMOOT. Yes; the designs are different.

Mr. RALSTON. I wish you would have in mind, please, in making the contrast the width and depth of the lines and the facility—relative facility of reproduction by any method of counterfeiting.

Mr. SMILLIE. I engraved those portraits, and, knowing it was to be printed on this blue paper I omitted a lot of the detail—what we call interwork—so as to keep it as clear as possible on that blue paper, but there was no reference to the mode of printing or anything of the kind.

Mr. RALPH. Mr. Smillie, did you do the engraving on this one [indicating]?

Mr. SMILLIE. I think so; I am not sure. I have done such a lot of those; I think that is mine.

Mr. RALSTON. You are now looking at one of the older ones.

Mr. RALPH. I want to say to you, Mr. Smillie, that Mr. Seeley engraved that portrait.

Mr. SMILLIE. Did he; I beg pardon. I have done such a lot of them and I really do not know.

Mr. RALSTON. Did you receive any instructions, if you recall, relative to widening or deepening the lines of the new engraving?

Mr. SMILLIE. None whatever.

Mr. RALSTON. You spoke of the engraving having been changed on account of the paper, or at least because it was to be printed upon blue paper.

Mr. SMILLIE. I did that on my own volition.

Mr. RALSTON. Now, if it were a matter of reproduction by counterfeiting which of those two stamps could be more readily reproduced?

Mr. SMILLIE. I should think that this later one could—the one that I did.

Mr. RALPH. Speaking about the portrait or the stamp as an entirety?

Mr. SMILLIE. Speaking only of the portrait.

Mr. RALSTON. Why would you consider that more easily capable of reproduction?

Mr. SMILLIE. Because there is a whole lot of fine work there, that interwork that I speak of, which should be more difficult to photograph or reproduce than would the opener or clearer work that I have put on here [indicating].

Senator SMOOT. And that would apply the same if it were to be printed on hand press or power press—the same principle would apply?

Mr. SMILLIE. Exactly.

Mr. RALSTON. I forgot what it was that we looked at yesterday. We were looking at a beer stamp, perhaps a quarter barrel. I understand that the beer stamps contained here on the left-hand page were used under the hand press.

Mr. RALPH. Yes, sir; and those were used on the hand press as well [indicating].

Mr. RALSTON. And they were succeeded by the stamps on the right-hand page which is now used on the power press?

Mr. RALPH. Yes, sir; and previously used on the hand press.

Mr. RALSTON. For how long a time?

Mr. RALPH. Oh, months; I do not know. I could tell you exactly by looking at the records.

Mr. RALSTON. At any rate the right-hand page is now used and has been used on the power press?

Mr. RALPH. Yes, sir.

Mr. RALSTON. For a number of months or years?

Mr. RALPH. Years.

Mr. RALSTON (to the witness). Will you please contrast the engraving on the two, having in mind the ease of reproduction by artificial processes?

Mr. SMILLIE. It is not a fair thing to compare the portraits with the lathe work and numerals that appear on the other.

Mr. RALSTON. So, from the standpoint of reproduction that is so of the reproductions?

Mr. SMILLIE. The borders of the two are the only thing you can institute any comparison of between them, because they are the same general character.

Mr. RALPH. Is this intaglio plate printed, Mr. Smillie?

Mr. SMILLIE. I should say that this black line would be more readily reproduced than this one [indicating].

Mr. RALPH. You spoke about the borders, Mr. Smillie.

Mr. SMILLIE. Speaking of the borders——

Mr. RALPH. You only referred to the borders. What is the difference in the style of engraving of the borders?

Mr. SMILLIE. This is a black line and this is a white line [indicating].

Mr. RALSTON. Are the borders plate printing or surface printing?

Mr. SMILLIE. Are they what?

Mr. RALSTON. Are the borders plate printing or surface printing in the two cases?

Mr. SMILLIE. Plate printing on that; that [indicating] may be surface. I do not know. That is unquestionably plate. I can not answer about that. That [indicating] is probably surface, I should say.

Mr. RALSTON. Do I understand you to say that the borders in the older stamp before you, or stamps, are surface printing?

Mr. SMILLIE. This one?

Mr. RALSTON. In the more recent plate printing?

Mr. SMILLIE. That one [indicating]; that is a plate print, undoubtedly.

Mr. RALSTON. Contrast the figures in the center on the two opposing pages as to ease of reproduction by counterfeiting.

Mr. SMILLIE. Do you mean the numerals?

Mr. RALSTON. Not the numerals, but the whole design in the center, as with the whole design in the other.

Senator SMOOT. One is the face and the other is——

Mr. RALSTON. One is the face and the other is the back.

Mr. SMILLIE. That is more readily reproduced than are portraits.

Mr. RALSTON. The mechanical-lathe design with the large figure is more easily reproduced, as I understand you, than the portrait.

Mr. SMILLIE. It turns on the openness of the work and the detail.

Mr. RALSTON. Yes. Now, the mechanical-lathe design is the one on the right-hand page, is it not?

Mr. SMILLIE. Yes, sir.

Mr. RALSTON. And the fine portraits, therefore, have been abandoned of late years on that particular revenue stamp; is not that true?

Mr. SMILLIE. Yes.

Senator SMOOT. That is done not on account of the fact that they can not be printed, but on account of the fact of a policy adopted by the department.

Mr. SMILLIE. Probably. They change the design every now and then.

Senator SMOOT. You have, no doubt, but what if they had the same design that they had years ago they could print it just the same to-day as they could then, have you?

Mr. SMILLIE. You mean hand press? I know nothing whatever about the printing, so that I can not answer your questions on that score.

Mr. RALSTON. I wish you would turn to the tobacco stamps that we were looking at.

Mr. RALPH. Where are they, front or back of the book?

Mr. RALSTON. I wish you would contrast the samples on the left-hand page of the tobacco stamps, which were used under the hand

press, with the right-hand page of the same, used under the steam press, and tell us which presents the better class of engraving.

Mr. SMILLIE. The one on the right-hand page [indicating page 5 of book containing samples of revenue stamps].

Mr. RALPH. That is surface printing around there?

Mr. SMILLIE. Yes. I was looking at the portrait?

Senator SMOOT. Is surface printing easier to counterfeit than plate printing?

Mr. RALPH. Oh, yes, sir.

Senator SMOOT. That is why I asked him whether it was or not.

Mr. RALSTON. Formerly there were two printings—the surface and the plate printing—were there not, on those stamps?

Mr. SMILLIE. That is all plate, is it not? I do not think that is surface work.

Mr. RALPH. These beer stamps are surface work.

Mr. SMILLIE. Is it?

Mr. RALPH. Yes, sir.

Mr. RALSTON. I wish you would contrast the vignettes and the lettering on the two and tell us which represents the better class of engraving.

Mr. SMILLIE. That is the better engraving—the head.

Senator SMOOT. The one that is being printed on the power press?

Mr. SMILLIE. Yes; if that is the one.

Mr. RALSTON. Is that a better engraving than the portrait on the other?

Mr. SMILLIE. A very poor one.

Mr. RALSTON. What is that?

Mr. SMILLIE. That is a very poor engraving.

Mr. RALSTON. Poor engraving? In what respect is it poor?

Mr. SMILLIE. This, on the other hand, is a very good one.

Mr. RALSTON. In what respect is the engraving on the left-hand page a poor one?

Mr. SMILLIE. In the irregularity of the work and general roughness in the finish.

Mr. RALSTON. I see. There is better workmanship on the one than on the other?

Mr. SMILLIE. That is a better-finished engraving than that is [indicating]—the heads.

Senator SMOOT. That is, our printing to-day is better than the one before?

Mr. SMILLIE. It is.

Senator SMOOT. Let me ask you if you ever heard of one of these being counterfeited—one of the tobacco stamps being counterfeited since they have been printed on the power presses?

Mr. SMILLIE. I do not know how long they have been printed on the power presses; I have no knowledge.

Senator SMOOT. I wondered whether you had ever heard of it.

Mr. SMILLIE. The only one I ever heard of being counterfeited was the one in that Lancaster case.

Mr. RALPH. That was fifty's cigars.

Mr. SMILLIE. Fifty's cigars, was it?

Mr. RALPH. Yes; and we were not then printing on power presses.

Senator SMOOT. I remember that case; that was before we started to print them on power presses.



Mr. RALSTON. Is it true, Mr. Smillie, that so far as revenue stamps are concerned there are special ways of detecting counterfeiting; that is to say, that the certain number of stamps, for instance, that the Government is acquainted with the production or the probable production of each tobacco factory or distillery and knows where its products are sold, so that any unusual sale or unusual production would attract the attention of the Government and its protection is secured in that way; is not that true?

Mr. SMILLIE. I do not know.

Mr. RALSTON. It is in the testimony here, Mr. Smillie, that with the use of the power press the lines may be deepened and broadened to meet the necessities of the press.

Mr. SMILLIE. The statement has been made that it is necessary?

Mr. RALSTON. Yes. I wish you would state what would be the effect of broadening and deepening the lines of an engraving so far as the facility for counterfeiting was concerned.

Mr. SMILLIE. It would facilitate it.

Mr. RALSTON. It would facilitate it?

Mr. SMILLIE. Yes.

Mr. RALSTON. I think that is all.

Mr. RALPH. What was his answer?

Mr. SMILLIE. That it would facilitate it if the lines were deepened and broadened and made wider apart—that it would make it easier to counterfeit either by photography or by hand.

Senator SMOOT. If this tobacco stamp here [indicating] is printed upon a power press would it be just as easily counterfeited as if it were printed upon a hand press?

Mr. SMILLIE. I can not answer. I do not know.

Senator SMOOT. You recognize the fact that you have testified here that the power press can print tobacco stamps with the best engraving on it?

Mr. SMILLIE. That it is good.

Senator SMOOT. And that it is better than the one printed upon the hand press?

Mr. SMILLIE. That is the better one [indicating].

Senator SMOOT. And that those printed upon the power press would be harder to counterfeit than the ones that were printed upon the hand press?

Mr. SMILLIE. In this case; yes.

Senator GALLINGER. Does not that relate to the engraving and not to the printing?

Mr. SMILLIE. I am referring to the engraving, not the printing; that is, the body or color.

Senator GALLINGER. That is not exactly what is in controversy. The controversy is as to the matter of printing—whether it will be printed as well. If they made a better plate for this, that is the engraver's art.

Senator SMOOT. And so would it be in relation to plate printing for currency.

Senator GALLINGER. But—

Senator SMOOT. That is exactly the question, as to whether the engraver makes a better plate or not. We take it for granted he would make as good plates for one as the other.

Senator GALLINGER. It would not follow that he would make a better plate—in this instance he did. So I do not see that that has any relevancy to the discussion at all.

Mr. RALSTON. I think that is all I want to ask Mr. Smillie.

Cross-examination:

Mr. RALPH. May I have those Canadian notes [exhibiting several notes to witness]. Mr. Smillie are the lines in that engraving produced by the power press in the American Bank Note Co. in character of engraving as deep as the lines which we engrave at the Bureau of Engraving and Printing?

Mr. SMILLIE. I can not answer that question.

Mr. RALPH. What would be the effect in printing if the lines were deepened? Would not the engraving be stronger in color?

Mr. SMILLIE. It would be generally heavier.

Mr. RALPH. If they were widened, would not they be strong in color?

Mr. SMILLIE. Widened and deepened?

Mr. RALPH. Yes. I say, either one way or the other. You might take a shallow line and deepen it, and would it not be stronger?

Mr. SMILLIE. It would be different in color, of course.

Mr. RALPH. If you take a shallow line and deepen it, would it not be strong in color?

Mr. SMILLIE. Yes.

Mr. RALPH. What does it indicate—that the lines used on that plate were very weak and shallow?

Mr. SMILLIE. No—no shallow lines; I do not think it does.

Mr. RALPH. How do you account for the grayness of the work?

Mr. SMILLIE. I do not account for it.

Mr. RALPH. You do not account for it? Is not the title of that very strong, Mr. Smillie?

Mr. SMILLIE. Yes.

Mr. RALPH. What?

Mr. SMILLIE. Yes.

Mr. RALPH. Why is the title of that so much stronger and stands out bolder and has some life to it as compared to the rest of the engraving?

Mr. SMILLIE. I could not answer, unless that is deeper; but the lettering—you can do that as you can not with a portrait.

Mr. RALPH. Of course, you are a portrait engraver. Mr. Smillie?

Mr. SMILLIE. Yes, sir.

Mr. RALPH. Then you do not set yourself up as an expert on lettering?

Mr. SMILLIE. Not at all.

Mr. RALPH. But, from your knowledge of engraving lines, the engraving of the lines on that title are much deeper than the other lines?

Mr. SMILLIE. Yes, sir.

Mr. RALPH. And in consequence they stand out black?

Mr. SMILLIE. The lines of the title are black.

Mr. RALPH. They are black; very black?

Mr. SMILLIE. Yes, sir.

Mr. RALPH. The same ink?

Mr. SMILLIE. The same ink.

Mr. RALPH. The same ink?

Mr. SMILLIE. Yes.

Mr. RALPH. If that is true, how do you account for the fact of its being so gray and flat?

Mr. SMILLIE. The method of printing had a different color on the different parts of a note, whether it is the ink or the press I can not tell.

Mr. RALPH. Have you ever seen an impression of that note printed from a hand press?

Mr. SMILLIE. Never.

Mr. RALPH. Do you think that it would look any better than that?

Mr. SMILLIE. I think it would. Of course, I do not know as to these vignettes as they were originally, but they look as though they would give it a better result, and I can not believe that a vignette looking like that would have been passed by the company.

Mr. RALPH. Mr. Smillie, you have no knowledge of why the designs of the tobacco stamps were changed?

Mr. SMILLIE. No; I have no knowledge of why nor when.

Mr. RALPH. Have you ever been instructed by the chief of the engraving division or myself in preparing an engraving to execute the lines of greater depth or width in order that it might be utilized on the power press?

Mr. SMILLIE. Never.

Mr. RALPH. Has the matter ever been discussed with you?

Mr. SMILLIE. Never.

Mr. RALPH. Have you any information whether or not the engraving you produced is to be used on hand or power press?

Mr. SMILLIE. None whatever.

Mr. RALPH. None whatever. You stated that this was a higher class of engraving than the tobacco stamp formerly printed on the hand presses.

Mr. SMILLIE. I spoke of the vignettes.

Mr. RALPH. Vignettes?

Mr. SMILLIE. Yes.

Mr. RALPH. Is it not a fact that in the Bureau of Engraving and Printing we are trying to increase and raise the standard of our engraving?

Mr. SMILLIE. I think we are.

Mr. RALPH. Trying to improve on it constantly, artistically and otherwise. That is your constant aim, is it not?

Mr. SMILLIE. That is my full belief. We receive every encouragement.

Mr. RALPH. In the engraving of that portrait used on the tobacco stamp would you treat that engraving differently from a portrait engraving of this character [indicating]?

Mr. SMILLIE. Do you mean engrave it in a different way?

Mr. RALPH. Yes. The fact that the engraving was going to be reproduced and taken up from a roll and make replicas from this roll, would that be taken into consideration—that is, bank-note engraving?

Mr. SMILLIE. Bank-note engraving as compared with ordinary picture engraving, of course, is different. In doing these large portraits I have done it in the same way—they have been straight, honest lines. In the old method of picture engraving they were finished with a burnisher.

Mr. RALPH. Finished with a burnisher?

Mr. SMILLIE. Yes.

Mr. RALPH. If you attempt to take a roll up from that, would not that leave a ragged edge?

Mr. SMILLIE. It would break down the number.

Mr. RALPH. So that in bank-note work you have got to differentiate and have your lines true and accurate, do you not?

Mr. SMILLIE. Yes.

Mr. RALPH. So that when it is taken up on the roll it stands in relief?

Mr. SMILLIE. So that the inkings are sharp and clean.

Mr. RALPH. In your evidence here you do not wish to qualify as a man competent to judge on the lathe work and the square lettering and the script on there, do you? You are only speaking of portrait work?

Mr. SMILLIE. Of the portrait work.

Mr. RALPH. Now, when you speak about counterfeiting, would you undertake to counterfeit one of those beer stamps, Mr. Smillie—that lathe work?

Mr. RALSTON. As a matter of morality or otherwise?

Mr. RALPH. I want to speak of the difficulty of the engraving. Could you reproduce that, Mr. Smillie, with your experience?

Mr. SMILLIE. I could not. My own experience has not been in that field.

Mr. RALPH. It could be reproduced with a mechanical process, could it not?

Mr. SMILLIE. That effect could be gotten by hand—lathe work—easier than on the vignettes and portrait.

Mr. RALPH. Do you think lathe work more readily counterfeited than portrait work and vignettes?

Mr. SMILLIE. Yes.

Mr. RALPH. You saw the hundred-dollar Monroe head, did you not?

Mr. SMILLIE. Yes, sir.

Mr. RALPH. How was the portrait executed?

Mr. SMILLIE. It was exceptionally good; the best I have ever seen.

Mr. RALPH. As a matter of fact, could you reproduce an engraving so that it would be an exact reproduction?

Mr. SMILLIE. I have.

Mr. RALPH. Would there not be some discrepancies in it?

Mr. SMILLIE. What?

Mr. RALPH. Would there not be some discrepancies in it so that it could be differentiated?

Mr. SMILLIE. Not very much. I guess it might possibly be detected, but I doubt it very much. I had that to do once in the American Bank Note Co. I had to reproduce line for line and dot for dot. It was the hardest work I ever did, too.

Senator SMOOT. Do you reproduce work to-day so that it is absolutely the same, or do you try to do that?

Mr. SMILLIE. I never do. I never have any occasion to. On the contrary, I have every desire to get away from duplication.

Mr. RALSTON. Mr. Smillie, if it came to a question of a reproduction in a counterfeit way, which could the more readily be repro-

duced, this [indicating], let us say, this \$4 Canadian note, or this \$5 American note which I exhibit to you?

Mr. SMILLIE. The Canadian note—no, let me see; that is a Canadian note.

Mr. RALSTON. And why would it be the more readily reproduced?

Mr. SMILLIE. Principally because of the grayness.

Senator SMOOT. The color does not stand out—is not as bright?

Mr. SMILLIE. No; it is flat, does not present a contrast; the work—lines and dots—does not come out with the sharpness.

Senator SMOOT. The engraving is not as good?

Mr. SMILLIE. It is not.

Mr. RALPH. They have no tones?

Mr. SMILLIE. No; that is lacking.

Mr. RALPH. Have you any knowledge that those notes have ever been counterfeited?

Mr. SMILLIE. I never heard of it; no, sir.

Mr. RALSTON. Now, will you contrast the printing? You spoke about the engraving not being so good. In what respect also is the printing not so good?

Mr. SMILLIE. I should say the printer was at fault in that note [indicating], because of that grayness. There is every indication that in the original vignettes there was a lot more color than is brought out in this printing in this particular note.

Mr. RALSTON. Then, would you say the printing was deficient?

Mr. SMILLIE. Partly.

Mr. RALSTON. Would you say that the engraving was deficient in the Canadian note?

Mr. SMILLIE. Well, it is not the equal of the work on that note.

Mr. RALPH. How do you explain the difference of the color strength in the title and the rest of the engraving?

Mr. SMILLIE. This one [indicating]?

Mr. RALPH. Yes.

Mr. SMILLIE. I do not attempt to explain it.

Mr. RALPH. It is possible that the plate from which that was printed was worn?

Mr. SMILLIE. It is possible; and yet it has a pretty good color right there in one place of the central vignette.

Mr. RALPH. Yes; from your knowledge of engraving you do not believe the portraits on that note there were cut with the same depth of line as the characters in the title?

Mr. SMILLIE. Certainly not.

Mr. RALPH. Then if those were printed on power presses they did not deepen their lines or widen their lines in order to get better results, did they?

Mr. SMILLIE. Not that I know.

Mr. RALSTON. What would have been the effect of the deepening and the widening of the lines on that vignette, of the Canadian note before you?

Mr. SMILLIE. It would have lost some of its character and delicacy on the portraits.

Mr. RALSTON. Would it any longer have been as good a specimen of engraving as it was—would it have continued to be as good a specimen of engraving?

Mr. SMILLIE. No.

Senator SMOOT. And yet it is not a good one now?

Mr. SMILLIE. It would have been blacker.

Mr. RALPH. It would have been blacker if the lines were a little deeper?

Mr. SMILLIE. It would be blacker if the lines were deeper, yes; but it would lose some of its character because some of the lines are so close that if it had been deepened it would have muddied it up.

Mr. RALPH. The lines were not widened in this case?

Mr. SMILLIE. Not at all in that female portrait.

Mr. RALSTON. The effect of that deepening and widening would have been to drown out the finer lines, would it not?

Mr. SMILLIE. It would coarsen them.

Mr. RALPH. You do not believe that note has been coarsened in order to place it on the power press? The American Bank Note Co. has not found that necessary.

Mr. SMILLIE. That is not; that is very close.

Mr. RALSTON. And not having been coarsened, you consider the printing to be inferior?

Mr. SMILLIE. Whether that is the reason or not I can not say, but I should think that to be so.

#### TESTIMONY OF MARCUS BALDWIN.

MARCUS BALDWIN, having been duly sworn by the chairman, was examined by the committee and testified as follows:

Direct examination by Mr. RALSTON:

Mr. RALSTON. Mr. Baldwin, will you state your occupation?

Mr. BALDWIN. Plate engraver.

Mr. RALSTON. And how long have you been such?

Mr. BALDWIN. A little over 40 years.

Mr. RALSTON. Where have you been engaged in that business?

Mr. BALDWIN. First, at the National Bank Note Co., afterwards at the American, and then in business for myself, and then, finally, at the Bureau.

Mr. RALSTON. How long have you been in the bureau?

Mr. BALDWIN. Something over 14 years.

Mr. RALSTON. What character of work have you done at the bureau?

Mr. BALDWIN. Vignette work—portraits and figures of various kinds.

Mr. RALSTON. About the same class of work that Mr. Smillie has been engaged on?

Mr. BALDWIN. Very similar.

Mr. RALSTON. Mr. Baldwin, I want to exhibit to you some Canadian currency and ask your opinion of it as to its character as engraving and as to the printing and the general effect.

Mr. BALDWIN (after examining currency). It seems to me they look flat and gray; that is the greatest trouble with them.

Mr. RALSTON. How do you account for the flat and the gray appearance?

Mr. BALDWIN. I can not tell, unless the plates were worn or that there has been some grayness about the ink some way.

Mr. RALSTON. Would the same effect be produced by the ink having been taken out from the plate in the process of printing—taken out to a great extent?

Mr. BALDWIN. It might have been produced in that way.

Senator SMOOT. That would apply also to the words "Dominion of Canada" if it had been that, just as much as any other part—if that was the reason?

Mr. BALDWIN. Unless they had been deeper.

Senator SMOOT. Of course, then, that would be in the plate?

Mr. BALDWIN. Yes.

Mr. RALSTON. Now, suppose the lines had been deepened and broadened there. What would have been the effect upon the engraving?

Mr. BALDWIN. They would have had more color in the note.

Mr. RALSTON. From an artistic point of view, what would have been the effect?

Mr. BALDWIN. I think there would have been more contrast.

Mr. RALSTON. Would it have been as good a specimen of engraving or better or worse?

Mr. BALDWIN. I think it would have been coarser, of course, and not as fine-looking work.

Mr. RALSTON. What would you say, then, the lines being deepened and broadened, as to the possibility of reproduction by photographic methods?

Mr. BALDWIN. I should think it would facilitate photographing in the proportion that they widened the line and made it clear—easier to photograph.

Mr. RALSTON. I will ask you whether the careful shading and toning and engraving is in itself a protection against counterfeiting?

Mr. BALDWIN. I think it is.

Mr. RALSTON. Will you look at the backs of those several notes and tell us what you think of the engraving and printing on them?

Mr. BALDWIN (examining certain notes). They seem to have the same difficulty. They are not black.

Mr. RALSTON. Which kind of note is more easily reproduced photographically, the flat note, as you term it, or one which presents the raised appearance given to good plate printing?

Mr. BALDWIN. I should think the one with the least contrast in it.

Mr. RALPH. Which is that, Mr. Baldwin?

Mr. BALDWIN. The flat.

Mr. RALSTON. You speak, then, of the raised appearance as offering a contrast?

Mr. BALDWIN. Yes; there is greater body of ink and greater contrast of light and shade.

Mr. RALSTON. I wish, looking at the face of the notes, you would state whether you find the same ink used in the title "Dominion of Canada" as used in the rest of the note.

Mr. BALDWIN. I think so.

Mr. RALSTON. Apart from the question of grayness, and going over the note as carefully as you will with a glass, tell us whether there is any variation in the print in the different parts of the plate.

Mr. BALDWIN. No. The titles seem to be stronger; the blacks cut deep and the lettering is blacker; otherwise it seems to be uniform in the matter of the ink.

Mr. RALSTON. Would you undertake to say from looking at it that the plate was an old one or not?

Mr. BALDWIN. I could not.

Senator GALLINGER. As these notes all have this gray appearance—they are similar in that respect, and they are different issues and different dates—is it reasonable to suppose that it is because the plates were old?

Mr. BALDWIN. No; I should say not.

Senator GALLINGER. I understood you to say that you thought that probably was the explanation.

Mr. BALDWIN. I said it might possibly be in this case.

Senator GALLINGER. But they are of that appearance?

Mr. BALDWIN. Yes; I know. These notes you have here—

Senator GALLINGER. I hardly think that could account for the color and the general appearance of the notes if the plates were old, because they are all alike.

Senator SMOOT. We have 15 notes down here, some made by hand presses and some by power presses. Do you find the same defects in any of those notes [handing notes to witness]?

Mr. BALDWIN. They seem to be all—

Senator SMOOT. They are bright enough.

Mr. BALDWIN. Bright color.

Mr. RALSTON. You do not know the circumstances under which those notes were printed, do you?

Mr. BALDWIN. No, sir. I do not.

Senator SMOOT. Then do you think that the dullness of the color comes from, first, the inferior grading and, second, from the color of ink used?

Mr. BALDWIN. It seems to me so.

Mr. RALSTON. By the way, do you know anything about whether the same ink is used on the steam and hand presses?

Mr. BALDWIN. No; I do not.

Senator SMOOT. The engraving on these notes is a better class of engraving than the engraving on the Canadian notes that you have been shown?

Mr. BALDWIN. I am not sure of that.

Senator SMOOT. Can you examine them and see and express your opinion?

Mr. BALDWIN. I am not sure that these are inferior engravings in any way. That I can not see.

Senator SMOOT. Do you think that a Canadian note with that brown dull color—

Mr. RALPH. Underlying tint.

Senator SMOOT. Underlying tint, for instance, on this one bill, we will say—

Mr. BALDWIN. Yes, sir.

Senator SMOOT (continuing). Would be harder to counterfeit than on a lighter note, similar to ours?

Mr. BALDWIN. No; I do not; I think not.

Senator SMOOT. Then, if that claim is made it is wrong?

Mr. BALDWIN. It seems to me so.

Senator SMOOT. Have you heard of any of these notes ever having been counterfeited?

Mr. BALDWIN. I never have.



Senator SMOOT. Even as poorly printed as it is?

Mr. BALDWIN. No.

Cross-examination:

Mr. RALPH. Mr. Baldwin, you take that \$1 Canadian note and look at the title there.

Mr. BALDWIN. Yes.

Mr. RALPH. The fact that that stands out so strongly and with such color strength would indicate that the depth of lines was considerably greater than on the rest of that note, would it not?

Mr. BALDWIN. I think it would; yes, sir.

Mr. RALPH. In the execution of your work at the Bureau of Printing and Engraving, have you ever been instructed by the chief of division or myself or any other official of the bureau to deepen the lines or widen the lines for any particular purpose?

Mr. BALDWIN. Not that I know of.

Mr. RALPH. Have you any knowledge in your work of the lines being so deepened or widened for use on the power presses?

Mr. BALDWIN. I have not.

Mr. RALPH. Never discussed the matter with you?

Mr. BALDWIN. No.

Mr. RALPH. As a matter of fact, do you not think the original die from which this plate was made, that the engraving was stoned down, reducing the depth of line, to get that grayness of color?

Mr. BALDWIN. You mean to get this particular impression?

Mr. RALPH. Yes; get that gray effect.

Mr. BALDWIN. No; I do not think so.

Mr. RALPH. But the line is not up to the normal strength of character, is it? Do we not engrave the lines for our work here with greater depth than that?

Mr. BALDWIN. Yes; they have got more contrast than that. I do not know the cause of this being so flat.

Mr. RALPH. If it was a fact that you had to deepen the lines for a power press in order to get the best results from printing, they have not done it in this case, have they?

Mr. BALDWIN. No.

Mr. RALPH. That is all.

#### TESTIMONY OF MICHAEL J. FLAHERTY.

MICHAEL J. FLAHERTY, having been duly sworn by the chairman, was examined by the committee and testified as follows:

Direct examination by Mr. RALSTON:

Mr. RALSTON. Mr. Flaherty, what is your occupation, please.

Mr. FLAHERTY. Plate printer.

Mr. RALSTON. How long have you been such?

Mr. FLAHERTY. Twenty-six years.

Mr. RALSTON. Are you employed in the Bureau of Engraving and Printing?

Mr. FLAHERTY. Yes, sir.

Mr. RALSTON. How long have you been employed there?

Mr. FLAHERTY. Twenty-one years; a little over—21½ years, about.

Mr. RALSTON. Were you ever employed on the hand presses?

Mr. FLAHERTY. Yes, sir.

Mr. RALSTON. How long ago?

Mr. FLAHERTY. Well, about 17½ years ago.

Mr. RALSTON. Have you been employed on the steam press?

Mr. FLAHERTY. Yes, sir.

Mr. RALSTON. How long, about?

Mr. FLAHERTY. Seventeen and one-half years.

Mr. RALSTON. And when employed on the hand press, what character of work did you do?

Mr. FLAHERTY. Well, backs and revenue.

Mr. RALSTON. Mr. Flaherty, were you familiar with the machine in use about 23 or 24 years ago in the bureau?

Mr. FLAHERTY. No, sir; I was not there at that time.

Mr. RALSTON. You can speak, however, for the past 17 or 18 years?

Mr. FLAHERTY. Yes, sir.

Mr. RALSTON. Has there been any improvement affecting the character of the printing produced during the time that you have been there?

Mr. FLAHERTY. Well, I should say not.

Mr. RALPH. On power presses?

Mr. RALSTON. On power presses, of course.

Mr. FLAHERTY. The press has been improved from a mechanical standpoint, I should say, but not from a printing standpoint.

Mr. RALSTON. Can you, on the power press to-day, produce any better work than you could 16 or 18 years ago?

Mr. FLAHERTY. Well, I do not think so.

Mr. RALSTON. Now, to what have these improvements related that have taken place?

Mr. FLAHERTY. Well, the press is a stronger machine than it was at that time.

Senator GALLINGER. Speedier, is it not?

Mr. FLAHERTY. Yes, sir; the speed has been increased and considerable lost motion has been taken up. Now, that is in the circulating planks.

Senator SMOOT. If these tobacco stamps were printed upon a power press to-day 17 years ago could you have printed as good a job?

Mr. FLAHERTY. Yes, sir.

Senator SMOOT. On the power press then?

Mr. FLAHERTY. Yes, sir.

Senator SMOOT. Can that tobacco stamp be printed better on a hand press than it has been upon a power press?

Mr. FLAHERTY. You mean this particular impression?

Senator SMOOT. Yes; that impression.

Mr. FLAHERTY. Yes; I should say so.

Senator SMOOT. How is it, then, that this is a better impression, harder to counterfeit, than the one that you printed upon a hand press?

Mr. FLAHERTY. Well, kindly permit me to look at these. [After examining specimens of printing.] If that is the hand-press impression, it is not a very good impression—not a very good specimen; that is slightly broken, the portrait there [indicating].

Senator SMOOT. It is not any better executed than this printed upon a power press, is it?

Mr. FLAHERTY. That impression there is not; no, sir. But if this impression is printed by hand I think it would have more color to it; that is, the one great fault with them is in producing the color.

Mr. RALSTON. Why do you have it?

Mr. FLAHERTY. Well, the wiper; in fact, I do not think that the press has been perfected to such an extent to equal the hand-press work.

Mr. RALSTON. We are talking now about the production of color. What is there about the power press that prevents the color from being produced as it is on the hand press?

Mr. FLAHERTY. Well, the power press has a heavy wiper and the plate passes under that wiper, just as you see it there. Now, to illustrate, the wiper goes over this way [indicating] about like that; makes a motion, and it goes partly with the lines.

Mr. RALSTON. And when it goes with the lines, what is the result?

Mr. FLAHERTY. It would have a tendency to take the ink out and reduce the color.

Mr. RALSTON. The motion of the wiper is fixed, is it not, under all circumstances?

Mr. FLAHERTY. Yes, sir.

Mr. RALSTON. Can you yourself on a power press do as good work as you formerly did on the hand press?

Mr. FLAHERTY. No, sir.

Mr. RALSTON. And you say further, generally the power-press work in the bureau is equal to the hand-press work in the bureau?

Mr. FLAHERTY. Well, I should say not, from my own observation; from my own experience, I should say not.

Mr. RALSTON. Coming back to where I was a moment ago, have any improvements been made affecting the operation of the wiper in the past 17 years?

Mr. FLAHERTY. Well, there has been no material change in those wipers. We have altered them from time to time, but I think I might safely state that we are back to where we were when I first went down there. The pad is practically the same, only that the material used in that pad is heavier, is thicker, and a little bit softer; it is of heavier material.

Mr. RALSTON. What kind of ink do you use on your power presses—free-flowing ink?

Mr. FLAHERTY. Yes, sir. It is necessary to have free-flowing ink in order to get the distribution.

Mr. RALSTON. How is it as contrasted with the hand-press ink?

Mr. FLAHERTY. Well, you can get a much finer and clearer impression with the hand-press ink, because it is not so oily.

Mr. RALSTON. What is the effect upon the article produced by using an oily ink?

Mr. FLAHERTY. Well, it would make more a mushy impression.

Mr. RALSTON. Well, does it leave any scum, as you may call it, on the plate?

Mr. FLAHERTY. It is more difficult to polish, as a rule, when ink has considerable weak oil in it.

Mr. RALPH. Which ink?

Mr. FLAHERTY. The thin ink?

Mr. RALPH. More difficult to polish?

Mr. FLAHERTY. Yes, sir.

Mr. RALSTON. Is it more difficult to polish the power-press plate?

Mr. FLAHERTY. If the ink is too thin; yes, sir.

Senator SMOOT. It is not necessary for the ink to be too thin?

Mr. FLAHERTY. It is not necessary to be too thin.

Mr. RALSTON. In point of fact, it has to run very freely on account of the speed at which the press runs?

Mr. FLAHERTY. It would not make a particle of difference about the speed of the presses. If the press did not run fast, it would require the same ink. If the ink was not thin, it would congeal in the fountain and therefore not distribute properly. I might state, in reference to the pad, that we used a jacket on the pad when I first went down there. That was a piece of material that covered over this pad proper, and that could be removed at any time during the day on short notice, in case it was necessary to do it. But now we have to take the pad entirely out if we want to make a change.

Mr. RALSTON. What change has been made in the roller, in the ink distribution, in the time that you have been in that room?

Mr. FLAHERTY. It is the same exactly.

Mr. RALSTON. You have the same single roller?

Mr. FLAHERTY. Yes, sir.

Mr. RALSTON. And have used that at all times?

Mr. FLAHERTY. They did have an "idler" there—what we call an "idler"—that did not come in contact with the fountain roller at all. It was a small idler; that is, small in circumference.

Mr. RALSTON. Had that anything to do with the distribution of the ink over the plate?

Mr. FLAHERTY. That was the intention of that idler; but we came to the conclusion that it was useless, so we threw it away.

Mr. RALSTON. Has there been any improvement in the article produced because of the doing away of the idler?

Mr. FLAHERTY. No, sir.

Mr. RALSTON. What would you say about the relative wearing of the plate as between the hand press and the steam press?

Mr. FLAHERTY. Well, the plates wear out much quicker, although in the past two years I wish to state that the plates on the postage stamps, on which I am now working, lasted a great length of time; they lasted, probably, at times—well, formerly a set of plates would last, maybe, six weeks—and a set of plates within the last couple of years would last six or seven months.

Mr. RALSTON. In what way do you first notice the effect of the wearing of the plate? How does the wear show itself at first?

Mr. FLAHERTY. Well, it generally wears on the side that enters the wiper first—on that side.

Mr. RALSTON. So that that becomes light?

Mr. FLAHERTY. Yes, sir.

Mr. RALSTON. The impression there becomes light?

Mr. FLAHERTY. Yes, sir.

Mr. RALSTON. What next did you notice in the way of wear?

Mr. FLAHERTY. Well, when that plate wears on the side that enters the wiper first it makes a contrast between that side and the side that goes under last.

Mr. RALSTON. What makes that contrast? Is it the wiping out of the fine lines?

Mr. FLAHERTY. Well, when that plate enters that wiper, each impression as it passes through causes that rag to shift. That can be regulated to some extent, and shifted probably an inch and a half—from 1 to 2 inches, say. Each time that plate strikes a clean part of

that rag, that will wipe that out alongside there. If you run the plate a few inches under the wiper—I think I can safely say that—if you then take the wiper off completely, you would find that all this here [indicating] would be completely wiped out; that is, so much wiped out that it would not make any kind of an impression worth speaking of.

Mr. RALSTON. Are the fine lines wiped out first?

Mr. FLAHERTY. Naturally they would be; but let me state here that that impression now as it goes under that wiper, this rag becomes what we call "fat" with the ink, you know, and then that recharges that plate again, so there it brings it out on the other side with a fairly good impression; that is, for power-press work.

Mr. RALSTON. Do you get an even impression?

Mr. FLAHERTY. No, sir; you do not get the same effect on one side as you do on the other.

Mr. RALSTON. You have it light on one side and dark on the other side of the same plate?

Mr. FLAHERTY. Yes, sir.

Senator GALLINGER. Mr. Flaherty, I understood you to say that the plates wear out more rapidly on the steam presses than on the hand presses. Do you take into account in making that statement the relative output?

Mr. FLAHERTY. Yes, sir; I took all that into account.

Senator GALLINGER. Supposing you had, we will say, 50,000 impressions, you could print those in about one-fourth the time on steam that you could on the hand press?

Mr. FLAHERTY. Oh, yes; much less than that. You can do them in much less time on the power press than you could on the hand.

Senator GALLINGER. My question was whether you were taking that into account.

Mr. FLAHERTY. Yes, sir.

Senator GALLINGER. The output?

Mr. FLAHERTY. I am taking that into account and I stated, as you know, that the plates have lasted longer in the last year or two than they have previous to that.

Senator GALLINGER. How do you account for that?

Mr. FLAHERTY. I think it probable that was the steel.

Senator GALLINGER. Better material that they were made of?

Mr. FLAHERTY. Better material in the steel. At one time there they were in pretty bad shape. The plates wore out so rapidly that we were compelled to lose time on that account; they could not make the plates fast enough to keep up with us.

Mr. RALSTON. Mr. Flaherty, I want to show you some specimens of postage stamps—a number printed together. They were printed on a power press, were they not?

Mr. FLAHERTY. Yes, sir; they were printed on a power press.

Mr. RALSTON. State whether there is any difference in the impression of printing between the two sides of those stamps—the two ends of those stamps.

Mr. FLAHERTY. Well, that would not bear out my argument. There is a difference there, but that would not bear out my statement.

Senator SMOOT. Just the reverse—

Mr. FLAHERTY. Just a minute; I have something more to say. This is one-quarter of the sheet. This is the first fourth that passes

under the plate, because, you understand, there are 400 stamps on a plate.

Mr. RALPH. Mr. Flaherty, just allow me to interrupt you a moment. You say that is the first. Do we not reverse the plates so that the other end of the sheet may have gone through the press first?

Mr. FLAHERTY. Yes, sir.

Mr. RALSTON. Why do you reverse the plate?

Mr. FLAHERTY. In order to make the plate wear even. That was the suggestion I made (by the way; in order to make the plates wear more even. What I wanted to state was this: That this plate, I can see, is lighter on this side than it is on that, and therefore I would say that that plate went through the wiper this side first, you see [indicating]. Now, there is 400 on plate—200 each way. The other end of the stamps would be over here [indicating], and there would be a material difference between this light stamp over here than over here [indicating]. As it goes across it gets heavier.

Mr. RALSTON. Is that general observation true of all power-press printing?

Mr. FLAHERTY. I should naturally think where a clean part of the rag strikes first would cause plates to wear.

Mr. RALPH. Do we reverse the plates on revenue stamps?

Mr. FLAHERTY. I do not know, sir.

Mr. RALPH. Have not you ever printed any revenue stamps on the power press?

Mr. FLAHERTY. I printed revenue stamps, I think, before they reversed the plates.

Mr. RALPH. Have not you in chancing worked on revenue presses or had revenue jobs on your press in the last two years?

Mr. FLAHERTY. I do not think I have had a revenue job on my press since they have been reversing the plates, but I have seen the plates on other presses and may have worked them a day or two; I do not know whether they were reversed or not, because they changed them every week, you see.

Mr. RALPH. Is it not a fact that the jar of the pressure from the roll on the edge of the plate assists in wearing out the plate where it enters the roll?

Mr. FLAHERTY. That is the good side; that is the side that never wears out.

Mr. RALPH. The side that never wears out?

Mr. FLAHERTY. Yes, sir; of course it would wear out in time, you know. I would not say it never wears out, but it never goes away as quick as this side. This is not a good example to demonstrate what I would like to demonstrate. I would like to have a sheet that goes all the way across.

Senator SMOOT. Does that go in this way [indicating] or that way?

Mr. FLAHERTY. This plate here—we will say this is the press and wiper [illustrating], or the plate, rather, and here is the wiper, and when the plate passes in that way, this wiper goes like that [indicating], when it goes into this sort of a motion, and this part here [indicating] strikes first, and then the rag gets "fat" as it goes along. Now, the first few impressions you print are worthless and practically wiped out altogether, and then when that rag becomes fat—full of ink—then it makes a better impression.

Senator SMOOT. You say the first impressions are worthless?

Mr. FLAHERTY. As a rule; yes, sir.

Senator SMOOT. Are they destroyed?

Mr. FLAHERTY. I suppose they are; yes, sir.

Senator SMOOT. Every time that comes into the press?

Mr. FLAHERTY. Oh, no; not that sheet. I mean when you start in the morning.

Senator SMOOT. That would be the same with anything?

Mr. FLAHERTY. Every time you put a rag in—and you put in several rags each day.

Senator SMOOT. That is the case with all kinds of machinery more or less?

Mr. FLAHERTY. Probably; yes.

Senator SMOOT. Until you get your machine set?

Mr. RALSTON. But it would be true, would it not, all day long that the parts of the plates which first go under the wiper show up lighter than the rest of the plate; is not that true?

Mr. FLAHERTY. Yes, sir; as a rule, on postage stamps.

Mr. RALSTON. Is there any reason why it should not be true on any other kind of stamps?

Mr. FLAHERTY. Perhaps if they were set farther in maybe it would make a difference.

Mr. RALPH. If you had more margin on the edge of the plate, that engraving would work all right.

Mr. FLAHERTY. That might make some difference.

Mr. RALPH. The ends get the shock of the wiper first, is that the idea?

Mr. FLAHERTY. Yes, sir.

Senator SMOOT. In other words, postage stamps as they are printed take the full surface of the plate?

Mr. FLAHERTY. All but about 1 inch all around; maybe an inch and a fraction.

Senator SMOOT. If there were less impressions that would be obviated?

Mr. RALSTON. Obviated, do you mean to say altogether or in part?

Mr. FLAHERTY. You say, if there were less impressions—

Senator SMOOT. The less subjects on a plate, you know, then there would be a larger margin?

Mr. FLAHERTY. Yes, sir.

Senator SMOOT. And then, of course, that coming in would be obviated as to the wear of the plate?

Mr. FLAHERTY. No; I do not think it would, because the new part of that rag is still there, just shifted under there, if it were charged with ink you would get a fuller impression, and that happens back here; very often you have to use a hand rag. [Indicating.]

Senator GALLINGER. You say, Mr. Flaherty, that sometimes you have to use a hand rag in running the work through power presses?

Mr. FLAHERTY. Well, occasionally, we do; but that is when the wiper does not take the ink off properly. Sometimes the ink will probably distribute a little too freely, but those things are largely regulated.

Mr. RALSTON. Your pressure on your roller is adjusted, is it not, to the size of the engraved work on the plate?

Mr. FLAHERTY. Yes, sir; the printing of the roll, that is, the top of the roller—pressure roller, I might say.

Mr. RALSTON. So that your remarks as to the relative lightness and heaviness would apply equally would they not whether the whole of the plate was covered with engraving, or whether only part of it was covered?

Mr. FLAHERTY. The pressure, so far as that is concerned, is the same all the way across.

Mr. RALSTON. I mean to say about the taking up of the ink.

Mr. FLAHERTY. That is, the wiper; that is a different proposition.

Mr. RALPH. What you want to convey, Mr. Flaherty, is that when the wiper comes in contact with the steel plate there is the shock, and then the cloth on the wiper gathers up the ink and the rag becomes fat and it distributes on the surface of the plate so that there is more ink forced into the lines after the first shock.

Mr. FLAHERTY. This first part is wiped out completely.

Mr. RALPH. After the rag becomes fat?

Mr. FLAHERTY. Then it graduates; it leaves the ink heavier as it goes back; in other words, the first part of the plate under the wiper is always cleaner than the back part.

Mr. RALSTON. How do you adjust your ink-feed roller to the size of the job—you do adjust them, do you not?

Mr. FLAHERTY. Ink-feed roller?

Mr. RALSTON. Yes.

Mr. FLAHERTY. We have a regulation roller, a roller that is made to work on all large work. Then they would make another roller, of course, smaller for a smaller job, by inserting a piece of wood.

Mr. RALSTON. Relatively does the rag have any more ink on it when it is set in than when it goes out close to the margin?

Mr. FLAHERTY. No, sir.

Senator GALLINGER. Is there much counterfeiting of our postage stamps?

Mr. RALPH. Only one case in the history of the Government.

Senator GALLINGER. What denomination?

Mr. RALPH. Two-cent ordinary stamps which were then printed by private contractor.

Senator GALLINGER. How long ago?

Mr. RALPH. Eighteen hundred and eighty-four, I think.

Senator GALLINGER. And nothing since then?

Mr. RALPH. No, sir.

Mr. RALSTON. I think that is all I want to ask, Mr. Flaherty.

Cross-examination:

Mr. RALPH. Mr. Flaherty, you entered the service of the Bureau of Engraving and Printing in July, 1900—1890 I should say—

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. You were transferred to a power press in September, 1894, so that you worked four years, or about four years, on the hand press?

Mr. FLAHERTY. Yes, sir; in the bureau.

Mr. RALPH. You were printing internal revenue stamps and backs?

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. You were not a face printer?



Mr. FLAHERTY. No, sir; I did not work on faces. I worked faces on bonds, etc., before I came here.

Mr. RALPH. The first year of your service in the bureau, what was your daily average earnings?

Mr. FLAHERTY. I could not say that.

Mr. RALPH. The records of the bureau show it to be \$3.65 on a hand press.

Mr. FLAHERTY. For the year?

Mr. RALPH. Daily average, \$3.65.

Mr. FLAHERTY. Wait a minute, Mr. Ralph. What month was that taken for?

Mr. RALPH. The records show—I will be very glad to complete it with the insertion of the month and the days and make it a part of the record.

Mr. FLAHERTY. Just a minute.

Mr. RALSTON. Let him make his explanation.

Mr. FLAHERTY. The averages at the time were not taken by the year; they were taken by the month. A man might be entered as making \$9 to-day and be off the remaining 24 or 25 days of the month, and he would have a \$9 average. Since then it has been changed.

Mr. RALPH. The last three months of your service on the hand presses your average was \$5.26 a day.

Mr. FLAHERTY. Last three months?

Mr. RALPH. Yes, sir. What is your present average on the power press?

Mr. FLAHERTY. It is over \$9.

Mr. RALPH. \$9.93. When you worked on the hand press did you ever pay for any excessive spoilage?

Mr. FLAHERTY. I do not think I paid for very much spoilage. To the best of my knowledge I do not believe I paid for over \$2 or \$3.

Mr. RALPH. \$2 or \$3. In 1891, the second year of your service, you paid \$11.95 for excessive spoiled work.

Mr. FLAHERTY. Just a minute. That is a mistake; I never paid that in my life.

Mr. RALPH. We will produce the records of the bureau.

Mr. RALSTON. I am not objecting to this, Mr. Chairman, or to almost anything else that may be presented, but I do not see the relevancy of it or anything relevant in any way whatever.

Mr. RALPH. Mr. Ralston has taken much time with irrelevant matter, to my knowledge. I will not take up very much time. It is for the committee to decide as to the relevancy of the matter. In 1894, your first year on the power press, did you pay for spoiled work?

Mr. FLAHERTY. I do not think so.

Mr. RALPH. The records of the Bureau of Engraving and Printing show that you paid \$29.05.

Mr. FLAHERTY. My God, I never paid anything like that in my life. The records are false.

Mr. RALPH. We will produce the records, Mr. Flaherty.

Mr. FLAHERTY. There is something wrong about that; I never paid that—\$29.

Mr. RALPH. \$29.05. Now, then, Mr. Flaherty, are you a member in good standing of the Plate Printers' Union?

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. And have been ever since you worked as a journeyman printer?

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. As a man who has considerable experience in the printing of internal-revenue stamps and considerable experience as a power-press man, would you indicate to the committee which of those stamps were printed upon a power press and which upon a hand press?

Mr. RALSTON. Can you do that without knowing all the circumstances attending the printing in each case, and do you know those circumstances?

Mr. FLAHERTY. No, sir; I do not think I could pick out those samples there.

Mr. RALPH. If a power press does such inferior work, and the margins of the plates wipe out, I do not see why you can not.

Mr. FLAHERTY. If I say the power-press work is inferior to the hand-press work, I say it from the general run of things. It is my honest and firm belief that you can not produce the work on power presses that you can on hand presses, and I am thoroughly confident of that.

Mr. RALPH. The facts will speak for themselves, Mr. Flaherty. You were under the impression that was power-press work when you looked at it?

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. That was printed in the proving room by one of the most highly skilled printers in the bureau from the original die. Consequently, you must have a better impression from that than you would from a power press?

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. I wanted to correct you on that.

Mr. FLAHERTY. I did not pay particular notice, but here is the impression here I spoke mostly of.

Mr. RALPH. That was a die proof impression also. I offer those to Mr. Flaherty. Mr. Flaherty is a first-class man on the power press; he has had 16 years' experience. He has worked on the revenue work, on the hand press, and I will ask him to point out to the committee here wherein the power-press work is inferior. I will say one-half of the sheets are taken out of stock, the average work from the power press; the other half was printed by an expert printer in the proving room, where he had great care and deliberation in the preparation of the plate. So that we are making a comparison of the result of the power presses with the best possible results we can get from plate printing, and I will ask Mr. Flaherty to pick out sheets that were printed on the power press.

Mr. FLAHERTY. I would rather not try to pick them out, because I do not think that is a fair test of the hand press against the power press.

Mr. RALPH. Will you acknowledge to the committee that you can not pick them out?

Mr. FLAHERTY. I will; yes, sir.

Mr. RALPH. Let him have those notes. Let him pick out the five notes in them printed on the power press.

Senator SMOOT. Perhaps you have had no experience in printing currency.

Mr. FLAHERTY. Oh, yes, I have; I have worked some on that.

Mr. RALSTON. First, let me ask you, do you know that any one of those notes now shown to you was printed on power press under power-press conditions?

Mr. FLAHERTY. No, sir; only what I have heard here yesterday.

Mr. RALSTON. And you heard yesterday that they were printed under hand-press conditions, did you not?

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. What do you mean by hand-press conditions?

Mr. FLAHERTY. Mr. Poole said he stopped each time to wipe those plates off with a hand rag.

Mr. RALPH. If you were starting on a new job and the wiper was not properly wiping and there was surplus ink on the plate, would you not wipe it off with a hand rag?

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. Is it not a part of the duty of the printer?

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. Is not the printer responsible and in control of the work executed by that press?

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. Is not the plate printer in charge?

Mr. FLAHERTY. Yes, sir; he is responsible.

Mr. RALPH. And you have a rag for that purpose, do you not?

Mr. FLAHERTY. We do not generally have one; but we get one if necessary.

Mr. RALPH. If it were not for the fact that you had to wipe that plate occasionally and polish it you would not need a printer on each press would you; that is what the practical plate printer has to see—that the work is properly executed. Have you ever seen a power press in the American Bank Note Co.?

Mr. FLAHERTY. No, sir.

Mr. RALPH. You know something about the methods, do you?

Mr. FLAHERTY. I should say not. I have never worked one—never saw one.

Mr. RALPH. You know the plate printer on the power press of the American Bank Note Co. uses a rag on every impression.

Mr. FLAHERTY. I do not know that.

Mr. RALPH. In speaking about power presses, is it not a fact that the power presses have been improved since you have worked on them?

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. When you take up lost motion in a piece of machinery, does it not perfect the machine?

Mr. FLAHERTY. So far as the running part is concerned.

Mr. RALPH. Has not the wiper been improved greatly?

Mr. FLAHERTY. No, sir.

Mr. RALPH. It has not?

Mr. FLAHERTY. No, sir.

Mr. RALPH. In the perforation of those holes on the face of the pad on the wiper, has not that improved it?

Mr. FLAHERTY. We thought that, but we discarded that, and do not use it any more.

Mr. RALPH. Do not use it any more?

Mr. FLAHERTY. No, sir.

Mr. RALPH. The starching rags have been improved?

Mr. FLAHERTY. I think if you probe into the record you will find that the rags were starched the last time when backs were printed on power presses in the Bureau.

Mr. RALPH. Have you ever complained to any of the officials of the bureau or to any member of your union about the poor quality of the work that you were executing on the power press? Did you think it was a shame to print such work as you executed?

Mr. FLAHERTY. No, sir. I have at times made complaint about the work, certainly, when things were not going properly.

Mr. RALPH. But you are satisfied with the conditions under which the power press is operated, are you not?

Mr. FLAHERTY. My conditions—yes, sir.

Mr. RALPH. Do you prefer to work a power press to a hand press?

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. You earn more money on the power press?

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. Your work is easier or lighter?

Mr. FLAHERTY. The work is easier in some respects; easier physically, but I think there is more of a mental strain.

Mr. RALSTON. You have not grown fat on it?

Mr. FLAHERTY. No, sir; I have not grown fat on it. I have lost weight since I have been on the power press. I am 10 pounds lighter, I think, than I was.

Senator SMOOT. If you had worked over those two hot gas jets on a hand press during the summer time, do you not think you would have been thinner than you are now?

Mr. FLAHERTY. I was just simply stating I was stouter when I went down there.

Senator SMOOT. I would like to see every one of the plate printers get away from those hot jets that they have to work on in the summer time.

Mr. FLAHERTY. We do not have any hot jets on the power presses. [To Mr. Ralph.] Mr. Ralph, I would like to make a little statement.

Mr. RALPH. Surely; make any statement you would choose.

Mr. FLAHERTY. When that work—the postage stamps—came into the bureau under Mr. Claude M. Johnson they were at a loss—they could not get a man to do that work. They had eight presses and they had eight men engaged in the operation of those presses. Now, every one of those eight men, I think, with the exception of one or two, of course, all went back to the hand press. It was a new idea in the bureau, and naturally they brought men that had former experience, say in 1888. They brought old experienced men back there again; yes, I think I might safely say they all made failures. They all went back, with the exception of probably two.

Senator SMOOT. What year was that?

Mr. FLAHERTY. That was about 17 years ago—17½. That is how I came to get down there. I was working on a hand press, and they came to me and said—Mr. Murray, who was superintendent then, said—“You are wanted down in the power-press room.” I went down there and I told them, “I don’t know anything about power presses nor never saw one before.” He said, “You must go down.” They did not give me time to wash my plates. I had locked proof,

but everything was looked after and I went down there. I was told by Mr. Randall, the power-press superintendent at that time and at the present time, that I would be compelled to stay there for a month. He said, "We want you to take this for a trial for a month, and if you do not like it at the end of that month, after the end of that month you can go back to your hand press." Under those conditions I went to work and performed my duty to the best of my ability. Now, mind you, I had no experience in my life on a power press up to that time. You were speaking about the first year I paid \$29 and something. I went to Mr. Randall and I said, "I have decided to go back to the hand press." "Well," he said, "I am afraid they will not allow you to go back." I said, "Why not? According to the agreement I was to try it for a month." He said, "Well, you will have to see Mr. Johnson, the director. I do not think he will let you go back." I said, "Why not?" He said, "They think you can do this work all right." So I went to Mr. Johnson and I said, "Mr. Johnson, I have worked for one month on the power press and it is my desire to return to the hand press." He wanted to know the reason why. I told him it was because the work was too hard. That was one reason—the principal reason. "Well," he said, "Those presses have got to be run, and we think that you can do that work. There is only one alternative—you can keep that press or you can resign." I was not in a position to resign; I did not want to lose my job. So I stayed there and I have been there ever since. So, do you think it would be fair, even if they did charge me \$29, which I have no knowledge of—I do not believe I had that entered on the record—do you think it would be fair, even if they did charge me \$29 for spoiled work in the first month of my operation of those presses? I do not think any fair-minded—

Senator SMOOT. The first year?

Mr. FLAHERTY. The first month. Is not that it, Mr. Ralph?

Mr. RALPH. I did not say first month; I said first year you worked on the power press, 1894.

Mr. FLAHERTY. The first year I paid how much?

Mr. RALPH. \$29.05.

Mr. FLAHERTY. Well, even if the first year I paid \$29.05, there are others who paid a hundred, because from the very beginning I think I did as good and better than the majority of men down there.

Senator SMOOT. You are there to-day, and you are very thankful you went on the power press?

Mr. FLAHERTY. I am doing very well.

Senator SMOOT. And you would not go back; and I think that would be the case, as far as I am concerned, with every hand plate printer there is in the Government; and if it were not for that, if I did not believe that with all my heart and soul, I would never ask one of them to leave the hand presses.

Mr. FLAHERTY. Senator, that is the question. Of course, I do not think that deals with the printing properly. Of course, I think it is a healthier position than with the hand-press work. I feel satisfied of that.

Mr. RALPH. Mr. Flaherty, what was the other reason you had for wanting to give up the power press at that time?

Mr. FLAHERTY. That was the only reason.

Mr. RALPH. Were not men at that time working on the power presses looked down upon?

Mr. FLAHERTY. No, sir.

Mr. RALPH. Was there not opposition to the power press?

Mr. FLAHERTY. I think I have been about as popular as any other man.

Mr. RALPH. Did not they have great difficulty to get good men to work on the power presses when they compelled you to do so on the threat of handing in your resignation?

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. This does not exist to-day, does it?

Mr. FLAHERTY. No, sir.

Mr. RALPH. We have many applicants for power presses?

Mr. FLAHERTY. I should think so.

Mr. RALPH. Now, Mr Flaherty, do you use a rubber roll for filling in your press?

Mr FLAHERTY. No, sir.

Mr. RALPH. Have you used one?

Mr. FLAHERTY. I have.

Mr. RALPH. Is that better than the old roll?

Mr. FLAHERTY. I thought it was. I thought it was a better roller than the other, but, of course, I only worked that roller, maybe, now, two or three months.

Mr. RALPH. Is it not a fact that the quality of the postage stamps printed now is superior to the stamps printed three or four years ago, or five years ago?

Mr. FLAHERTY. Well, I am not in a position to state the quality of engraving.

Mr. RALPH. I am speaking about the printing.

Mr. FLAHERTY. Wait a minute. We had some very artistic designs of those stamps, and they were very delicate; and I was under the impression—of course, I formed this impression myself. I think it was the consensus of opinion among the men that those stamps were changed because they were a delicate engraving.

Mr. RALPH. But you do not want to make that statement as a fact, do you?

Mr. FLAHERTY. No, sir.

Mr. RALPH. A suspicion in your own mind?

Mr. FLAHERTY. I was of that opinion.

Mr. RALPH. The fact is, that the design of stamps was changed at the request of the Postmaster General. You stated awhile ago that the plates lasted for six months now, whereas sometime ago the average life of a plate was about six weeks.

Mr. FLAHERTY. I would not say the average life, but I know at one time there—I do not know whether that was during your administration or not—but I know there was a time when we had to go off on account of no plates. They could not turn out the plates in the engraving room fast enough to supply the presses.

Mr. RALPH. You do not know the cause of that?

Mr. FLAHERTY. I only judged it was the steel.

Mr. RALPH. You do not know that as a fact?

Mr. FLAHERTY. Well, I am pretty well convinced it was the steel.

Mr. RALPH. You are?

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. Well, we will give you some enlightenment on that later on. The change of design—do you think that had anything to do with the wearing quality?

Mr. FLAHERTY. I think these plates wore better than they used to.

Mr. RALPH. Do you think the improvements on the press have increased the life of the plate?

Mr. FLAHERTY. The pad that we use now is wholly blanket, blanket all the way through. We did have a leather, a rawhide for the surface of this pad, and I do not know whether that wore the plate out or not.

Senator SMOOT. Do you think it would faster than the pad?

Mr. FLAHERTY. I do not know. It is not pliable as a pad; it has a harder surface; but I should judge it would probably have a little more effect on the plate, because it is hard; but these pads now are softer. I worked one of the old presses that they had there in 1888 that was discarded at that time and brought back to print half plates on. That was one of the old Milliken presses that was discarded.

Mr. RALPH. They were reinstalled?

Mr. FLAHERTY. Yes, sir; one, I think.

Mr. RALPH. In 1895 or 1896, around there?

Mr. FLAHERTY. Yes, sir.

Mr. RALPH. You printed proprietary stamps on that; is that it?

Mr. FLAHERTY. No; due stamps.

Mr. RALPH. Customs due?

Mr. FLAHERTY. No; postage due stamps.

Mr. RALPH. Postage due stamps, with a small plate?

Mr. FLAHERTY. Half plate; 200 subjects.

Mr. RALPH. That postage due plate had no portrait on it—all lathe work, with the denomination and numeral in the center.

Mr. FLAHERTY. All lathe work; yes, sir.

Mr. RALPH. That is not as difficult to print as the postage stamps we print to-day, is it?

Mr. FLAHERTY. Well, we have a great deal of difficulty with that job. There was a time, within the last year and a half or so, they could not fill them in; they could not get the plates to fill in properly, and the job was taken away from a man and given to another man, and that man fell down materially in his day's work, and afterwards I got the job, but I think the ink was changed, because I do not think I lost 600 sheets on the whole job.

Mr. RALPH. Mr. Flaherty, before leaving the stand, I want to ask you if you will not kindly look over this with a view to showing the committee some of the inferior printing in that exhibit?

Mr. FLAHERTY. Well, if you wish me to.

Mr. RALPH. I want to tell you, before you look at those—will you point out to the committee what you think might be power-press work?

Mr. FLAHERTY. I do not believe I could do that intelligently, because you can not—it would take considerable time to pass judgment on them. Mr. Ralph, if they charged the spoiled work to me—

Mr. RALPH. Don't you worry about that, Mr. Flaherty. I want to say for your information that I consider you just as good a printer as there is in the Bureau of Engraving and Printing. Do not worry about that at all.

As a matter of record, are you unable to point out which is power-press work?

Mr. FLAHERTY. I would rather not pass upon it, Mr. Ralph, because I do not think it is a fair sample, to my idea, of power-press work. Technical power-press work is very different from hand-press printing. I do not think you can produce the same kind of work.

Mr. RALPH. That is all.

### TESTIMONY OF S. E. BEACH.

Mr. S. E. BEACH, having been duly sworn by the acting chairman (Senator Smoot), was examined by the committee and testified as follows:

Direct-examination by Mr. RALSTON:

Mr. RALSTON. Mr. Beach, will you state your occupation, please?

Mr. BEACH. At the present time I am representing the plate printers as the chairman of their executive board, but up to the last of September I was a plate printer at the Bureau of Engraving and Printing, engaged in working a power press.

Mr. RALSTON. How long have you been engaged on a power press?

Mr. BEACH. From the 1st day of October, four years prior to that, as near as I can recall.

Mr. RALSTON. Before that time, what did you do?

Mr. BEACH. I was a printer in one of the sections of the bureau, working on national-currency faces.

Mr. RALSTON. How long have you worked in the bureau altogether?

Mr. BEACH. Since October 5, 1894.

Mr. RALSTON. Did you learn your trade in the bureau?

(No answer.)

Mr. RALPH. There was an interval in which you were out of the service, was there not, Mr. Beach?

Mr. BEACH. With the exception of one year—October 1, 1905, to September 24, 1906—I was out of the service; for a part of the time through illness; up to January 31, 1906; at that time I resigned on account of ill health.

Mr. RALPH. Have you worked in any other establishment than the Bureau of Printing and Engraving? Did I understand you to say that you resigned, Mr. Beach?

Mr. BEACH. I resigned January 31, 1906, due to ill health.

Mr. RALPH. You are on the rolls of the Bureau of Engraving and Printing at the present time, are you not?

Mr. BEACH. 1906 was the time I resigned. I am still on the rolls.

Mr. RALSTON. Mr. Beach, how much of your time as a hand-press printer did you spend in the printing of faces?

Mr. BEACH. Well, I could not state that exactly, but I was on what they term the miscellaneous list for three or four years in the bureau.

Mr. RALSTON. That is, on all classes of work?

Mr. BEACH. Yes; on all classes of work, from the poorest to the highest, depending on the demand; most of the time on what was known as white work.

Mr. RALSTON. As a power-press man, what kinds of work have you done?

Mr. BEACH. On postage stamps, revenue work, and in 1898, the time I was on a power press, I printed the proprietary stamps and



documentary stamps used in the Revenue Department for the Spanish War tax.

Mr. RALSTON. Have you had occasion to contrast plate printing by hand with plate printing by power?

Mr. BEACH. I have.

Mr. RALSTON. State what difference there is in the results produced by the two systems?

Mr. BEACH. The result is that the work of the power press is a decidedly inferior impression compared with the hand press.

Mr. RALSTON. In what respect?

Mr. BEACH. In that it lacks life or color or richness in color; it is a lighter impression as a rule.

Mr. RALSTON. Do you get the raised impression that is on the hand print?

Mr. BEACH. No, sir; it is a flat impression.

Mr. RALSTON. I am speaking now of the hand print.

Mr. BEACH. Oh, from the hand print; yes.

Mr. RALSTON. And how is it as compared with the power print?

Mr. BEACH. Well, it gives you a flat impression, due to the fact that the machine—the wiping appliance on the machine—takes down the ink to within the lines that are engraved upon the plate. The lines are not as full of ink as those on the hand press, due to the operation of the wiper.

Mr. RALSTON. You have seen these examples of the Canadian currency. I wish you would state whether the flat appearance of those faces is due to the wiping down by machine-press work?

Mr. BEACH. I have examined these several times and I can say without hesitancy that I believe a great part of the flatness of that work is due to the fact that the color is not brought out of the engraving as it should be, due to the process of printing.

Senator SMOOT. Would that same condition obtain with our printing here?

Mr. BEACH. I think so, sir, as far as bank notes are concerned.

Senator SMOOT. Have you seen the bank notes printed upon the power press?

Mr. BEACH. I have.

Senator SMOOT. Do they show those lines?

Mr. BEACH. You say I have seen bank notes printed on the power press?

Senator SMOOT. Have you or have you not?

Mr. BEACH. I saw the backs printed in 1898, which were decidedly inferior to those printed on the hand press.

Senator SMOOT. I thought you had seen the \$1 bills shown here and that you had examined them?

Mr. BEACH. No; Mr. Ralph took them away from me.

Mr. RALPH. Oh, Mr. Beach, they laid in front of you for an hour. Did not you and Mr. Ralston examine those and compare them?

Mr. BEACH. I did; at a distance.

Mr. RALPH. Didn't you have them there?

Mr. BEACH. I made no comparison.

Mr. RALPH. Do you make that statement under oath?

Mr. BEACH. I make the statement that I made no comparison.

Mr. RALPH. Did you examine those notes carefully with your attorney?

Mr. BEACH. At a distance of about 2 feet, I did.

Mr. RALPH. You held them with your hands with your heads together, did you not?

Mr. BEACH. I did not.

Senator SMOOT. Did you not handle those notes and put them down on the table, and put them back after you got through with them?

Mr. BEACH. Those notes you have here?

Senator SMOOT. Those \$1 notes.

Mr. BEACH. I do not recall that I did closely. I say I examined them with Mr. Ralston at a distance of about 2 feet, and I offered suggestions to Mr. Ralston as to what difference there was in those notes.

Senator GALLINGER. It seems to me this question can all be settled by letting the witness examine the notes.

Mr. RALSTON. Have you seen any notes printed by the steam-power press under power-press conditions, either in the committee room or elsewhere?

Mr. BEACH. Have I seen them produced under power-press conditions?

Mr. RALSTON. Yes.

Mr. BEACH. Not to my knowledge, unless this exhibit here—

Mr. RALSTON. Now, there were exhibited here yesterday and perhaps this morning these \$1 notes. You saw them yesterday, did you not?

Mr. BEACH. I did.

Mr. RALSTON. And can you tell whether the notes that you saw, purporting to be printed by power press, were printed under power-press conditions?

Mr. BEACH. I could say they decidedly were not.

Mr. RALSTON. Well, in what respects were they not so printed?

Mr. BEACH. Because the difference between the power-press printing and hand-press printing is in handling the rag, filling in the plates, wiping off the plates; and the gentleman who testified yesterday testified that he stopped his press 39 times in 40, and that it was difficult on account of the thickness of the ink to wipe it off, thereby producing the effect of this being done by the hand press or by hand-work.

Senator SMOOT. Mr. Beach, you called upon me once, did you not, in connection with Mr. Foster?

Mr. BEACH. No, sir; I did not.

Senator SMOOT. Were you not in this office with Mr. Foster when the chamber of commerce committee was here?

Mr. BEACH. Yes, sir; but I did not understand that I called upon you. My understanding was that you asked the chamber of commerce to allow you to be heard in order to prevent their protest against the passage of this law, and I appeared with Mr. Foster before the chamber of commerce committee and in your presence.

Senator SMOOT. Of course, Mr. Beach, you are mistaken as to that; but that was not the point I was trying to bring out. Did you not make a statement at that time that hand wiping was the particular thing in bringing out the clearness of the notes, and without that hand polishing it was impossible to do the work on a power press?

Mr. BEACH. I would like to divide your question. You say from hand wiping, and then you speak of polishing. The technical ex-

pression in the trade when you say wiping, is to use the hand rag. When you say polishing, it is to use the bare hand to take off the scum from the plate.

Senator SMOOT. Did you not say it was a question of polishing the plate with the hands that required the technical skill of a plate printer to bring about the best results?

Mr. BEACH. No. It is the wiping with the rag and the polishing. I can change the tone of the plate by my hand and with the rag, but more with the rag than with the hand. The rag is the principal feature if the plate is filled in properly.

Mr. RALSTON. Mr. Beach, what difference is there in the ink used in the hand roller presses and on the power presses?

Mr. BEACH. Usually it is not of the same consistency as the hand-process ink. It is what the printer terms thinner; it runs more freely.

Mr. RALSTON. What different result do you get from that different ink?

Mr. BEACH. The result would be obtained by wiping the plate on the power press the same as on the hand press.

Mr. RALSTON. Yes.

Mr. BEACH. On the power press the pressure of the wiper is so great that it would take more ink out, and we find it has to have a stiffer and stronger ink.

Senator SMOOT. You can regulate that pressure in any way you desire on the power press, can you not?

Mr. BEACH. Well, it can not be less than the weight of the wiper. You can adjust it on the lower pad.

Senator SMOOT. You can adjust in all cases when it is more than the weight of the wiper, would not you think?

Mr. BEACH. Well, I should say so.

Mr. RALSTON. Will you tell me, please, whether in the Canadian specimen exhibited to you the lines have been wiped out or the ink in them largely diminished?

Mr. BEACH. I think from the examinations I have made from those specimens that they are wiped down so closely that you do not have the full color that could be produced by the engraving if it were wiped properly.

Mr. RALSTON. Is not that the reason for the gray appearance that has been spoken of?

Mr. BEACH. I attribute most of it to that.

Mr. RALSTON. Do you find any difference in the coloring used in the large lettering "Dominion of Canada" and that used in the pictures on the plates?

Mr. BEACH. Yes; that is very black; but all of the black on those notes was printed at the same time.

Mr. RALSTON. So that it is all done at one printing?

Mr. BEACH. Yes, sir; that is, I don't know of any reason why they would print two blacks on one impression; in two operations.

Mr. RALSTON. Coming back to your presses; you have worked how many years on the power presses?

Mr. BEACH. I worked for a short time in 1898; and about four years, lacking a few days, until the latter part of September, 1911.

Mr. RALSTON. You have heard the various improvements spoken of stated to have been made on power presses. I wish you would

state whether or not it would have any effect upon the finished product?

Mr. BEACH. Well, there have been a number of mechanical changes such as adjustments of bolts and things of that kind in adjusting different parts of the machine; but the general product of the press has not been changed any by any adjustments to the machinery. These four planks of which the other printers have spoken that move around on the tracks have been made to run around more regularly, perhaps on account of a change in the mechanical arrangement in the corner by two sprockets there upon which the planks turn; but the operation is exactly as I have known it since 1894 and 1895. And I can speak from actual knowledge, because I was employed in the bureau's pressroom at that time as a messenger or in the place of the laborers on leave of absence; 1895 that was.

Mr. RALSTON. Can you get from the power press any better result to-day than you could under the power press as it existed in those years—1894 and 1895?

Mr. BEACH. No, sir; I do not think I could.

Mr. RALSTON. It simply results in giving a quicker movement to the press?

Mr. BEACH. Not in so far as the result of the printing operation is concerned.

Mr. RALSTON. Would it not be an incidental result of that, that with a quicker movement would come a more careless production?

Mr. BEACH. It does so.

Mr. RALSTON. So, then, the improvement, as I understand you, has tended to a deterioration in the quality of the work rather than a benefit?

Mr. BEACH. Well, the trade is bothered a great deal by what we term, technically, "sly wipes," and when the press is operated rapidly a man does not have the same time to polish his plate properly as he would if it moved slower. The result is that he screws the wiper down closer, and takes off more ink than he would if he had plenty of time to polish.

Senator SMOOT. What position do you hold at the present time?

Mr. BEACH. I am on the rolls of the bureau as a plate printer, but I was asked if I was employed, and I said, "Not since September," and I gave the occupation I have been following since that time.

Senator SMOOT. What was that?

Mr. BEACH. As chairman of the executive board of the plate printers.

Senator SMOOT. You are holding the position which was filled by Mr. George P. Foster at one time?

Mr. BEACH. I succeeded him.

Senator SMOOT. Are you receiving a greater wage than you were getting before?

Mr. BEACH. How do you mean—as the representative of this organization?

Senator SMOOT. As the representative of the organization, as compared to your wages as a plate printer.

Mr. BEACH. I am getting exactly what my average calls for on the rolls of the bureau, or as near to that as it can be adjusted; nothing else.

Senator SMOOT. What are your duties?

Mr. BEACH. To act in the capacity of chairman of the committee; look after the grievances of men; and to attend to any business of the organization, no matter of what nature or character it may be; anything which affects the interest of the men in that organization, I am supposed to know and to attend to it and to adjust the conditions as far as possible.

Senator SMOOT. The duty falls upon you then, as the representative of the plate printers' union, to visit Senators or Congressmen to protest against this provision in the printing bill?

Mr. BEACH. I would not say that it was my duty.

Senator SMOOT. But you have been doing it.

Mr. BEACH. Yes, sir; I have called upon Senators.

Senator SMOOT. I have no objection at all to your doing that; if that is part of your duty.

Mr. BEACH. I do not know that that could be laid down as part of my duty.

Senator GALLINGER. You would have the right to do that as an American citizen.

Mr. BEACH. As I say, I do not know that that could be laid down as part of my duty; but in so far as this proposition is concerned affecting the trade, I would say that it would be generally a part of my duty; but I have never considered it so.

Senator SMOOT. I have no objection whatever to your doing that. I have no fault to find with you for doing that. I would consider it to be a part of your duty.

Mr. BEACH. I do not think that, Senator; but I want to speak technically so as to know just what the duties are. The duties of the officers of the organization are usually laid down in the law, and I do not know whether it is broad enough to cover that, but I have been doing it. I did the same thing as president of the organization.

Mr. RALPH. I want it to go on record that the officers of the Bureau of Engraving and Printing have no objection to Mr. Beach exercising his rights as an American citizen and calling upon Members of Congress or Senators in matters affecting his trade. I want to mention the fact that he is absent with my consent; his name is now carried on the rolls as a plate printer.

Senator SMOOT. As I have stated, I have no objection to his doing that. All I wish to do is to establish the fact that Mr. Beach was doing exactly that thing, and that I had no objection to his doing it goes without saying.

Mr. BEACH. Well, I had not thought of that before answering the question.

Senator SMOOT. Of course you are afraid of me; but you need not be at all, Mr. Beach. That is, you think I am opposed to you. I am not opposed to you in any way. All I want to do is to get at the facts of this question. I want to do what is best for the Government and for the plate printers, no matter what the results may be hereafter.

Now, what I was trying to bring out is this: That you have fulfilled your duty—that is, what you consider to be your duty—and you have called upon Senators and Representatives and showed them this Canadian money. Have you done that?

Mr. BEACH. Yes, sir.

Senator SMOOT. You represented to them that that money is easily counterfeited, did you not?

Mr. BEACH. I told them that, in my opinion, it is easily counterfeited, and I believe so.

Senator SMOOT. Have you ever heard of one being counterfeited?

Mr. BEACH. I have heard that some of the Canadian notes are counterfeited and that that \$4 note is about to be withdrawn.

Senator SMOOT. But that is not on account of counterfeiting, is it?

Mr. BEACH. That is my information.

Senator SMOOT. That is what I wanted to call your attention to. You have said to a number of Congressmen and Senators that the reason for the Canadian \$4 note being withdrawn was because of the fact that it was being counterfeited.

Mr. BEACH. I also stated, Senator, that counterfeiting in the Dominion of Canada was not very great, due to the fact that they have a small population and that there are not so many, possibly, who are criminally inclined.

Senator SMOOT. Do you not know, and have you not had interest enough in this question to have found out, that not one of the Canadian notes printed on power presses by the American Bank Note Co. has ever been counterfeited?

Mr. BEACH. I made an attempt to secure such information through the Secret Service, but they do not give that out generally to the public, so I was informed.

Senator SMOOT. You could get at it if you wanted to, could you not?

Mr. BEACH. I do not know. Mr. Foster tried and he failed.

Senator SMOOT. Of course, Mr. Foster is not here, and I do not want to repeat what Mr. Foster said to me.

Mr. BEACH. Well, I can state here that he told me that.

Senator SMOOT. You are not in a position to say, then, that there ever was a Canadian bank note printed upon a power press that has been counterfeited?

Mr. BEACH. No; I have not that official information.

Senator GALLINGER. Do you know whether there has ever been an American bank note counterfeited?

Mr. BEACH. Only that the Secret Service has sent out circulars to that effect which I have seen and which I believe to be true.

Senator GALLINGER. So that if our notes could be counterfeited, it follows that the Canadian notes could be counterfeited, as they are inferior?

Mr. RALPH. Mr. Beach stated that the Secret Service sent out notice that the Canadian notes have been counterfeited. That is, those printed on power presses?

Mr. BEACH. I said that I made inquiry at the Secret Service, but that that information was not given out to the public generally.

Mr. RALPH. But that was in reference to notes printed on power presses.

Senator GALLINGER. Inasmuch as Mr. Ralph has stated that these are made exactly alike, I do not know what point you are making.

Mr. RALPH. We are not printing notes on power presses.

Mr. RALSTON. But we have in the past printed silver certificates on the power presses, and I think you will find that they were counterfeited.

Senator SMOOT. They were not counterfeited any more than other notes of the Government.

Mr. RALSTON. The testimony, I think, before the last investigation showed that notes so printed were more easily counterfeited.

Senator SMOOT. Yet, as a result of that investigation they were ready to make a favorable report upon power presses.

Mr. RALSTON. Senator, it must be borne in mind that there were two reports at that time—the report of the House committee, which was very emphatically in behalf of the position taken by the plate printers and the report of the Senate committee, consisting of but two Senators, as against the whole committee on the House side; and that the Senate itself, while it apparently sustained the report of the committee, in the end passed a law which rendered it impossible that the power presses should be continued in the bureau. Therefore the conclusion of the Senate in a practical point of view was against the report.

Senator GALLINGER. The fact is, Mr. Ralston, that the Senate committee as a committee made a report, but only two members sat on that committee.

Senator SMOOT. But the report was agreed to by the whole Finance Committee. I have the names here.

Mr. RALSTON. There were only two who took any part in it whatever.

Senator SMOOT. They sat as a subcommittee and heard the proceedings.

Mr. RALSTON. I do not think anybody else in the Senate committee took any part in it whatever. I do not think they ever appeared at a meeting.

Senator GALLINGER. That is a fact, as I remember it.

Mr. RALSTON. So, that in the same Congress there were two reports practically opposed to each other; the Senate and House reports.

Cross-examination by Mr. RALPH:

Mr. RALPH. Mr. Beach, have you ever seen any of these notes printed by a hand press?

Mr. BEACH. That is, you mean Canadian money?

Mr. RALPH. Yes; Canadian money.

Mr. BEACH. No, sir.

Mr. RALPH. I think, if you would communicate with the American Bank Note Co., they would be very glad to give you one.

Mr. BEACH. And I will say in reply to that that I am satisfied in my own mind from my experience as a printer that I can produce a better impression of that same note.

Mr. RALPH. Have you ever seen the plate?

Mr. BEACH. No; I judge from the character of the note that I can do better work than that.

Mr. RALPH. Mr. Beach, is it not a fact that the engraving on that note, with the exception of the title, is very weakly done?

Mr. BEACH. I could not say that from the standpoint of an engraver.

Mr. RALPH. You can state it, however, from the standpoint of a printer?

Mr. BEACH. As a printer I can produce any line cut on any plate.

Mr. RALPH. What do you imagine the depths of the lines were on that border there?

Mr. BEACH. Well, I could not say, because I have no means of measuring lines in plates. Sometimes the line is as faint as a hair's scratch; then, again, it will be cut as deep as one of the "i's" in the word "Dominion" there.

Mr. RALPH. How deep is that [indicating]?

Mr. BEACH. Well——

Mr. RALPH. You are an expert printer, are you not?

Mr. RALSTON. Well, he may not be an expert measurer.

Mr. BEACH. I have never measured engravings; but I will give a guess on that—that it is a thousandth or less than a thousandth of an inch.

Mr. RALPH. A thousandth of an inch?

Mr. BEACH. Yes. I am simply guessing at that; it is purely a guess.

Mr. RALPH. Mr. Beach, you do not think that the notes we printed on the power press, which Mr. Poole printed, was a fair test of the power-press work?

Mr. BEACH. No.

Mr. RALPH. Why?

Mr. BEACH. Because they were not produced under general power-press conditions as executed in the Bureau of Engraving and Printing.

Mr. RALPH. There is no rule in the union to prevent a man wiping a plate on a power press, is there?

Mr. BEACH. No.

Mr. RALPH. You yourself have used a rag?

Mr. BEACH. Yes; frequently; and I always produced a better impression.

Mr. RALPH. There is no rule in the Bureau of Engraving and Printing that would prohibit a man wiping his plate if it becomes necessary?

Mr. BEACH. Well, no.

Mr. RALPH. Now, you do not think that is a fair test?

Mr. BEACH. No; I do not think it is.

Mr. RALPH. As chairman of the executive committee of the Plate Printers' Union, you have a great deal of authority. You have the absolute authority to represent them in all things relating to legislation?

Mr. BEACH. Yes.

Mr. RALPH. Would you be willing for Senator Smoot to introduce a resolution into the Senate to-morrow for the purpose of authorizing the Director of the Bureau of Engraving and Printing to print 100,000 impressions of \$1 certificates on a power press?

Mr. RALSTON. I do not think, Mr. Chairman, that is a proper question at all.

Senator SMOOT. Of course, in an investigation of this kind, all we want to do is to get at the facts of the matter.

Senator GALLINGER. I think a resolution, Mr. Ralph, would be futile, because we are bound by law.

Mr. RALPH. I mean an act of legislation, Mr. Chairman—in order that we could demonstrate clearly this question. I want to go on record now as being interested in maintaining the highest standard possible in the printing of our securities. If it was clearly demonstrated to-day that we could not do that work I would not make any effort to do it.



Mr. RALSTON. That is a proposition of experimentation that I do not think the plate printers have anything to do with.

Senator SMOOT. We could find out this: That you do not object to it, and that you are perfectly willing that it should be done. Then we could get action by Congress; and I believe that would be the only way to bring it about.

Senator GALLINGER. Then you would have to change your system of law.

Senator SMOOT. We could do it for a limited amount.

Senator GALLINGER. If you undertook to do that, we would not have any tariff legislation at this Congress.

Senator SMOOT. We would not if they opposed it. That is what I wanted to find out.

Mr. RALSTON. In a sense, I want to submit to the committee that the making of that proposition is a confession on Mr. Ralph's part that he has not been able to prove that the power-press work is equal to the handwork, and that he hopes, perhaps, to be able to demonstrate it if he prints a million copies. I do not know as I personally would object.

Mr. RALPH. Mr. Ralston, I made no such statement. All I want to do, and I want to emphasize it emphatically and to reiterate it, is to have a fair test. I was not present when they made that test on the power press; but it was made in the presence of Mr. Beach's predecessor, Mr. George P. Foster, whose loyalty and fidelity to the organization can not be questioned; he was present and satisfied with the test. If he had asked me to print 100, I should have done it. I only want to satisfy everybody concerned that it has had a fair test. Mr. Beach is not satisfied with the printing of those 40 impressions and the exhibition of five of them. Let us print more; let us get enlightenment; let us get the facts. I do not ask anything more. I am satisfied to stand upon the experiment we have made as being convinced that we can do that work on power presses equal to the average work produced on hand presses to-day.

Senator GALLINGER. Mr. Ralph, under what authority did you print those specimen bills?

Mr. RALPH. By and with the consent of the chairman of the executive committee of the Plate Printers' Union and the Assistant Secretary of the Treasury, Mr. Andrews.

Senator GALLINGER. Why not get similar authority and print a larger number?

Mr. RALPH. It would not be possible to print those notes and issue them.

Senator SMOOT. But could you print them as specimens?

Mr. RALPH. I could, if there was no objection on any part, put four plates on there and print for a day or two or three days. I could not issue those notes under the law. I would be very glad if I was advised to undertake that. I recognize that the plate printers' union would have a right to get an injunction to prevent my doing such a thing if so disposed, and I recognize the fact that no plate printer could be compelled to operate a press printing them because of the fact that we have no authority under the law to print those notes.

Senator SMOOT. If you printed them with the word "specimen" on, do you think there would be any objection?

Mr. RALPH. We could print them as we printed these, leaving the signatures off.

I do not think there is anything else I care to ask Mr. Beach.

Redirect examination:

Mr. RALSTON. There are one or two other matters that I overlooked. What is the purpose of the wiping of the plates?

Mr. BEACH. The purpose is to take the surplus ink off the raised surfaces of the plate in order that the printer may polish it.

Mr. RALSTON. Do you avoid in the wiping taking off all the ink from the lines. In other words, do you take the surplus ink off, always leaving ink remaining?

Mr. BEACH. As much as possible; the object is to leave the line as full of ink as you can.

Senator GALLINGER. That is done to prevent blurring on the surface of the note.

Mr. BEACH. Yes, sir; the polishing takes off the surface scum left by the ink. The rag will not take that off, and without polishing you can not get a clean, sharp impression.

Mr. RALSTON. What principal do you adopt in wiping the plates? You do not do it haphazard, as Mr. Ralph suggested the other day?

Mr. RALPH. Are you speaking about a power press?

Mr. BEACH. I am speaking about a hand press. A man must use his judgment and skill in wiping the plate in order to avoid as much as possible the taking away of the ink in the lines in the plate and to reproduce each line as fully as he can.

Mr. RALSTON. Can that same thing be done on the power press?

Mr. BEACH. No, sir; not by the power-press wiper.

Mr. RALSTON. Can it be done if, after you have taken off some of the ink, you left it to the printer to wipe off more, to wipe off the balance, as was done in the printing of these specimen notes?

Mr. BEACH. The wiper on the machine wipes just the same, whether the man uses the hand rag or not afterwards.

Mr. RALSTON. The wiper on the machine depends to some extent on the extent to which it bears down on the plate?

Mr. BEACH. Yes, sir.

Mr. RALSTON. So that it could bear down lightly and leave something for the hand to do?

Mr. BEACH. Yes.

Mr. RALSTON. That would be practically hand printing, would it not?

Mr. BEACH. That is not doing the work under power-press conditions.

Mr. RALSTON. That would not result in economy under the power-press printing?

Mr. BEACH. No; because a man can not have the same speed and do the same class of work.

Mr. RALSTON. I am going to anticipate Mr. Ralph's question. He has put before you a sheet of \$1 notes. I will ask you how you would wipe the plate?

Mr. BEACH. This plate would be wiped to prevent the taking out of the lines in the folds here, the small lines drawn across near the heavy shading, and to prevent wiping out the breast of this eagle, with which the men have some trouble on the hand presses, and the

turning of the rag on the bottom where these two small portraits are. The men have some difficulty in bringing up the background. The men always have to have in mind the idea of wiping that plate in such a way as not to wipe those lines out. Every printer has his own idea about that, and uses his own judgment and his own skill in wiping and polishing a plate. With this plate a man has a rag similar to this [indicating], and he takes it in his hand and he folds it like this. That is the operation of folding a rag [indicating].

When he first puts the ink on that plate with his roller after filling it in properly—for instance, if he saw it would not fill in properly—he would go back and fill it; then he wipes it off with his rag in that way, being careful not to wipe out the lines if he can possibly help it. Then he turns it over to the smooth side and continues wiping carefully until the plate is in a condition to be polished, and so on. Every printer works differently and has his own method to catch the lines in that plate. Another one will do it in that way, and another will start in this direction. The wiping is done with this motion so as to draw the ink; somewhat of an angular motion from this corner toward the center, all the while being careful not to draw these lines.

Mr. RALPH. That would be the reverse of the process, Mr. Beach. It does not properly illustrate it.

Mr. BEACH. No; it does not illustrate the plate. You could not show how it is done unless you had the plate before you. If I saw that this eagle was printing weaker here than the other three, I would wipe that eagle or these heads to produce the effect I wanted in order to even them with the other two or three notes. The same would apply to other places. If the eagle in the center happens to be too weak, if the ink is distributed unevenly—

Mr. RALPH. Did you ever print any of the \$1 faces?

Mr. BEACH. Yes.

Mr. RALPH. When?

Mr. BEACH. Well, I worked with Mr. Jerrodet. He was in the same room that he is in to-day.

Mr. RALPH. I thought you were working on currency?

Mr. BEACH. You have my record there.

Mr. RALPH. I was asking about the \$1 face.

Mr. BEACH. Yes; I worked on that.

Mr. RALSTON. Suppose that same plate was put on the power press, will you explain the working of the wiper?

Mr. BEACH. Well, I do not know how. If this note were put on the power press singly, it would go through the press in that direction through the wiper, and the wiper would come along in this elliptical motion—in that “oscillating” way, as Mr. Ralph calls it; but the effect left on the plate by the scum of the ink is different because of that motion. In a job on the power press, where we have heads like the snuff stamps, they have trouble in wiping out the background in those heads; lines are cut out and are harder to produce than the other portions of the plate.

Mr. RALSTON. Is there any difference in the pressure of the wiper whether it be on the wide surface of the plate or whether it be on the finer engraved surface of the plate?

Mr. BEACH. No, sir; the pressure of the wiper is adjusted by screws in the top, and then it works back and forth and wipes all parts of the plate alike.

Mr. RALSTON. It does not take any notice at all of the lightly engraved or the heavily engraved parts or those parts not engraved at all?

Mr. BEACH. No, sir.

Mr. RALSTON. So that the motion of the wiper is fixed. You listened to the testimony yesterday that when the hand-press ink is used and the hand polishing and wiping resorted to, can you do your work on the power press as rapidly as you can do it on the hand press?

Mr. BEACH. That would depend upon the condition in which the press happened to be and the time you spent on it. If the ink came out very thick it would take longer to wipe the surplus off.

Mr. RALSTON. If you take a power press, bearing in mind these conditions that I speak of and taking twice as long as is ordinarily taken to produce a hand-press impression, can you so manage things as to get an impression approximately as good as a hand-press impression?

Mr. BEACH. Yes, sir; by adjusting the machine so that they will not wipe the lines out and using a hand rag.

Mr. RALSTON. Was that done according to the testimony yesterday?

Mr. BEACH. Yes, sir.

Mr. RALSTON. And about twice the time was taken that would be required to produce a like number of hand-press impressions?

Mr. BEACH. I say, figuring where a man does 12½ or 14 a minute, and the time used in printing those impressions, that he went slower than the hand-press man. Of course that takes into the consideration the operation of the machine, but the actual time spent on the plate in wiping it was about the same. It made some little difference.

Mr. RALPH. You have printed 50 cigar stamps on the power press, have you not?

Mr. BEACH. Yes, sir.

Mr. RALPH. Would you pick out the power-press stamps in this exhibit from the hand-press stamps [indicating]?

Mr. BEACH. I would not say that I could pick out the power-press sheets here from the hand-press sheets, because they are produced from new plates, and when you get a new plate on the power press you get a different condition.

Mr. RALPH. But the hand-press work is produced from the same plate. All of these are printed from the same plate, Mr. Beach.

Mr. BEACH. That may be.

Senator SMOOT. Then it is a question of how often you change the plate?

Mr. BEACH. No, sir; it is a question of getting conditions adjusted generally, and on a new plate a man does not have his press adjusted to general conditions.

Mr. RALPH. I want to go on record as saying that the impressions exhibited as power-press work are taken at random from stock and the exhibits of handwork are printed from a new plate. I do not know how old the plate was from which the impressions were taken from stock, but evidently not from a new plate.

Mr. BEACH. I do not think that is a fair test as to the product of the power press as compared with the hand press.

Mr. RALPH. Mr. Beach, will you make a suggestion of a test that would be fair, and that you would be willing to abide by?

Mr. BEACH. I think that the best test that could be made would be to see the general condition of power-press work and the general condition of hand-press work.

Mr. RALSTON. Taking it by and large.

Mr. RALPH. Take the general average, that would be the best possible way, and that could only be done by operating the press for some time and making comparison with like results on a hand press.

You said the other day I took these notes from you [indicating]. I would be very glad to have you look at them now.

Mr. BEACH. I hope you did not take any offense at what I said; but I said to Mr. Ralston that I felt that I ought not to pick them up, as I was to be called as a witness; and I felt that you took them away and that you did not want me to see them. After hearing the testimony here in connection with these notes I would not make any effort whatever to separate one from the other, because I think it is a very unfair proposition to try to pick out hand-press work from hand-press work.

Senator SMOOT. Could you pick out Canadian notes?

Mr. BEACH. I will compare Canadian notes. I will tell you which is the best in my judgment, but as to saying how it is produced I could not do that unless I knew the facts.

Senator SMOOT. You think it takes a great deal of skill in wiping the plates in producing currency or anything else on a hand press, do you?

Mr. BEACH. Yes, sir; I have always used skill and judgment.

Senator SMOOT. Do all of the other workmen use skill?

Mr. BEACH. I can not speak for anybody else except myself, but my impression is that every man must use skill in order to produce a good impression.

Senator SMOOT. Unless they do, it will be a poor impression?

Mr. BEACH. Unless they use judgment and skill it will be a poor impression.

Senator SMOOT. Do you not know that we have had men down there working on hand presses that never touched the hand press before they went there?

Mr. BEACH. There was one man down there that did that. Who that man was I do not know.

Senator SMOOT. Was there any objection to the work that he turned out?

Mr. BEACH. I do not know about that. The record of the bureau was entered here as a part of the testimony by Mr. Ralph, and if that is correct that probably sets out the facts in the case. I also know that a man——

Senator SMOOT. What I wanted to bring to your attention was that you say that unless a man has skill and uses judgment the production from the hand press will not be good, and it requires that skill and it requires that discretion on his part to produce good work. Is it not true that the work that was done by this particular party mentioned by the director was never objected to and passed through the department?

Mr. BEACH. I do not know anything about that man's record excepting as it was produced here. I did not come in contact with him, and I never saw any of his work.

Senator SMOOT. If the work had been inferior, the examiners would have thrown it out, would they not?

Mr. BEACH. Very likely they would.

Senator SMOOT. So whatever work he did was not questioned?

Mr. BEACH. I do not remember seeing the man, although I have heard of him.

Senator SMOOT. I am speaking in regard to the question of how much skill it takes.

Mr. BEACH. I do not know that the man did not have skill.

Senator GALLINGER. I want at this point to make an observation—with your permission, Senator Smoot.

Senator SMOOT. Just one moment, Senator, please. But he had never worked upon a hand press before. He had had no experience at all and could not have had very much skill, could he?

Mr. BEACH. I would not say that positively. The man may have had some. He might be an observing man in the bureau and he may have given it some thought and study without having the actual practical experience.

Senator SMOOT. You do not mean to tell me that a man can watch a piece of machinery, especially one that requires such skill as this, and simply look at a man doing the work and then go to work and do that as well as an expert. That is not possible, is it?

Mr. BEACH. I would not say that it was not possible.

Senator SMOOT. Do you really think it is possible?

Mr. BEACH. Such things have been done; yes.

Senator GALLINGER. The observation I was about to make was that some years ago this same contest was fought out in the Senate and as I recall it—I do not remember the date, but as I recall it—the late Senator Hawley and myself were the champions of the hand presses as against the power presses, and we argued in favor of letting the law remain as it was on the statute books—I do not know whether it was the law at that time—but, at any rate, in favor of the law as it stands now. I based my argument and my opposition to the measure upon the representations that were made to me that it was easier to counterfeit the notes printed upon the power presses. I believed that; but I confess I have been somewhat staggered when I have looked at these specimen bills, if they are honestly produced here, as I assume they are, and it seems to me that there should be some way by which that could be absolutely determined by printing a large enough number under the supervision of both sides, and in that way finally determine the question as to whether or not the contention on one side or the other is the correct one.

My sympathies are with the men, as are, I presume, Director Ralph's also.

Mr. RALPH. Yes, sir; they are.

Senator GALLINGER. And I am glad they are making more money running power presses than running hand presses; and if they could all have power presses I would like to see them in charge of them. But the question that has been heretofore the uppermost one in this contest—and I am assuming that it is largely so now—is the question of counterfeiting, and I myself would like to have some means of determining absolutely that question. I do not know that anything could be done. Mr. Ralph makes a suggestion that I think is

practicable, that we should get the power from Congress to do this thing and have printed a thousand notes without signatures. I understand that some 40 notes have already been printed on the power press without signatures, and I do not see why 10,000 of them might not be printed in the same way.

Senator SMOOT. I think we can arrange that perhaps.

Mr. RALSTON. Senator, I want to call attention to the fact developed yesterday, and that is that only 5 out of 40 specimens were produced here. Now, 40 is not an impossible number to be produced. I should like very much to renew my motion of yesterday that Mr. Ralph be required at the next meeting of this committee to produce the other 35 specimens; not that they are as bad as the steam press would ordinarily do, because they are—

Mr. RALPH. You mean as good?

Mr. RALSTON. No; I mean exactly what I say. Their errors have largely been corrected by the use of hand-press methods, but I think the committee is entitled to all the light in Mr. Ralph's possession, and I think that we on the other side are entitled to the benefit, as we are liable to be subjected to the damage, if you will, which may come from a full disclosure of the situation on his part.

Mr. RALPH. I suggest, Mr. Chairman, just before you close the hearings on this measure that I will be very glad to bring those notes up here. I have got them; at least, they are in the bureau.

Senator SMOOT. You recognize the fact that they were all done by the same process?

Mr. RALSTON. They were all done under the same conditions.

Senator SMOOT. It was the beginning of a new job, and all of them were made under the same conditions.

Mr. RALSTON. It was a cross between the hand-press and the power-press work, and in some instances a correction of the power press and in other instances a perpetuation of the errors.

Senator SMOOT. Let me ask you, as attorney for the plate printers, whether you would have any objection to the running off of 10,000 or 100,000 of these notes on a power press as specimens in order that we may judge from that?

Mr. RALSTON. Well, I have no power to object to any conclusion the committee may see fit to arrive at.

Senator SMOOT. I asked you whether you have any objection or not?

Mr. RALSTON. I do not think that an experiment of that kind would be determinative of the issue at all.

Senator SMOOT. Suppose the committee thought it was. Would you have any objection to it?

Mr. RALSTON. I could have none. It is entirely within the option of the committee. My objection would not signify; it could not signify.

Senator GALLINGER. Mr. Ralph, I will ask you if you absolutely printed 40 notes or did you have some waste notes before you commenced that 40?

Mr. RALPH. There were 40 in all. The first 4 or 5 impressions were almost blank.

Senator GALLINGER. Did you throw away a few?

Mr. RALPH. I have got them all.

Mr. Beach, when your organization was working to have a restrictive measure passed in regard to internal-revenue stamps as you

now are defending, did you not advance the same argument that you have to-day, that it would stimulate counterfeiting?

Mr. BEACH. In the printing of the postage stamps?

Mr. RALPH. No; in the printing of the internal-revenue stamps. Was not that the sole objection you made to the printing of those on power presses?

Mr. BEACH. In 1898 you mean?

Mr. RALPH. Yes.

Mr. BEACH. I think you made the same argument yourself.

Mr. RALPH. I did; yes, sir.

Senator SMOOT. That is the only argument you can make, is it, Mr. Beach?

Mr. BEACH. That is the only argument I would make; but that is as far as the perfection of the impression is concerned.

Mr. RALPH. Mr. Beach, is it not a fact that the 50-cigar stamps printed on the hand presses were counterfeited?

Mr. BEACH. I can not speak absolutely, because I have not the record.

Mr. RALPH. But you spoke of a man who walked through the Bureau of Engraving and Printing and made them. Did you have in mind Mr. Kendig?

Mr. BEACH. I said they were counterfeited by some man; I do not know what he did.

Mr. RALPH. He printed the stamps and the only experience he had in printing the stamps was in going through the bureau as an ordinary visitor.

Mr. BEACH. And he used his judgment at that time.

Mr. RALPH. He was a college graduate—a graduate of Harvard and a very bright man.

Mr. BEACH. And he used his knowledge and skill?

Mr. RALPH. The evidence of a court of record was that all the observation he had was in going through the bureau three times.

Mr. BEACH. I would like to state, if you will permit me, that I made that statement in answer to a question of Senator Smoot when he asked me if I thought a man would have knowledge and skill to do the work without having had experience.

Mr. RALPH. Don't you think that it is remarkable that Mr. Bates did not wipe some of the lines out?

Mr. BEACH. I could say positively, almost, without an examination of his work, that he did do it, because I know that is the thing that goes with the business. Every man wipes his work out. How much he wipes it out depends on his judgment and skill. No matter how good the printer is he spoils his work at times.

Mr. RALPH. In the interest of the work of the Bureau of Engraving and Printing, and which I very much appreciated, you recently paid a visit to private corporations and encouraged printers in an effort to file applications for employment in the bureau.

Mr. BEACH. Did you say that I visited private corporations?

Mr. RALPH. Well, you visited the vicinity and interviewed men who worked there and asked them to file papers.

Mr. BEACH. Yes, sir; that is right.

Mr. RALPH. And as a result of your effort a great many did make application by filing papers and qualified as journeymen printers.

Mr. BEACH. I do not know how many made application. That would have to be gotten from the civil-service records, I presume.



Mr. RALPH. Now, if you were charged with the responsibility of executing the work in the Bureau of Engraving and Printing to supply the Treasury of the United States with the necessary requisite amount of notes to maintain the business of our country and our banks and you found that it would take 120 plate printers to do that work, where would you get 120 plate printers; what would you do?

Mr. BEACH. Immediately?

Mr. RALPH. Immediately; within the next 10 or 12 or 15 days.

Mr. BEACH. I would not make an attempt to get 120 more men. I would double the force up and turn the work out rapidly.

Mr. RALPH. How do you mean, Mr. Beach—work beyond the regular day?

Mr. BEACH. Yes.

Mr. RALPH. Then you are not in favor of the eight-hour law?

Mr. BEACH. Oh, yes; and I am in favor of paying the men double time for all work overtime.

Mr. RALPH. Don't you realize that I am violating the eight-hour law now, and that most anyone could bring me up before a court of record and have me fined?

Mr. RALSTON. That is a public necessity, and you do not violate the law.

Mr. RALPH. If there is an exigency which arises and which compels me to, of course, if I can not get men to do the work, and the exigency exists, I can do that; but I have to make the defense. Now, assuming that the additional hour we are now working is equal to the product of 60 men, and I should go back to the regular hours and maintain the same number of notes I am printing now, I would have to appoint 60 additional men. On the eligible list of the Civil Service Commission they have 18 names. Do you think I could get those men immediately?

Mr. BEACH. Eighteen?

Mr. RALPH. Yes.

Mr. BEACH. If you gave them permanent employment, I think you could get 18 men.

Mr. RALPH. I do not want 18; I want 60, and I want 120 to maintain the schedule this year and for the fiscal year 1913. I would want 150 men.

Senator SMOOT. And by the way we want more good clean money printed, too, so that all parts of this country can have it.

Mr. BEACH. I have no doubt but that the increased production of money will be taken care of. Men can be secured in Washington, Philadelphia, and other places to do this increased work. The same argument was used in 1888 and 1898 that they could not get the work out. It seems to me purely an administrative measure with the men, and the question of the quality of the work produced would have nothing to do with it.

Senator SMOOT. The other night there were 211 men working down there on hand presses in the nighttime.

Mr. BEACH. The Government should give them the new building. Men are subjecting themselves to these bad conditions because of the fact that they believe they are helping the Government out, and they are doing just as much to further the interests of the Government as anyone else, and they are doing it without complaint.

Senator SMOOT. They can not do that at night, however. If they do that work, they will have to have more machines and more men.

Mr. BEACH. Yes, sir; certainly, because the men on night work follow the day men on the same press.

Senator GALLINGER. Mr. Beach, you spoke of apprentices. Is there a limitation on the part of your union as to the number of apprentices that can be employed?

Mr. BEACH. Senator Gallinger, that is reached by agreement between the department and the organization. It is 1 in 10 now, I believe. I would like to ask the director if that is true?

Mr. RALPH. That is the understanding we have.

Mr. BEACH. In any exigency that could be changed.

Mr. RALSTON. How many apprentices are there down in the Bureau of Engraving and Printing now?

Mr. BEACH. About 85.

Mr. RALPH. I recommended the appointment of seven additional apprentices yesterday.

Senator GALLINGER. Have you a definite term for them to serve?

Mr. RALPH. Yes; it is four years.

Senator GALLINGER. They serve four years before they become journeymen plate printers?

Mr. RALPH. Yes.

Mr. BEACH. My opinion is, from an investigation of the facts and of the conditions, that the bureau should turn out printers just as rapidly as the work is increased. It has always done so in the past. With 900 men on the rolls there now, one in ten will give 90 apprentices. We have never had the full quota except at certain seasons. It seems to me that Mr. Ralph—and I am not saying this as a word of criticism—but we believe that if all these estimates were to be made for the fiscal year and after the matter has been considered, more apprentices possibly could be appointed and more journeymen turned out in this way. You take 90 boys; you would have your apprentices there divided over four years, and with 100 boys in the Bureau of Engraving and Printing serving their time of apprenticeship of four years there would be 25 journeymen turned out each year.

Senator GALLINGER. Do you think your union would be willing to increase that proportion?

Mr. BEACH. I say it is reached by agreement, and it could be changed at other times. We have a very happy condition in the Bureau of Engraving and Printing.

Mr. RALSTON. Mr. Beach, who fixes the term of four years for learning the trade?

Mr. BEACH. The organization fixes that.

Mr. RALSTON. Is it considered that a four years' apprenticeship is necessary in order to master the details of the trade?

Mr. BEACH. It is true of most labor organizations. I do not know how that four years was arrived at, whether it is an arbitrary time or not.

Senator SMOOT. They are generally young boys when they come in?

Mr. BEACH. The way we take that matter into consideration is this: A young boy going into a trade does not develop as rapidly as a man would who would go in there. When he begins the apprenticeship there are so many things to learn that it takes four years to get him

fixed as a journeyman mechanic, whether it be plate printing or anything else.

Mr. RALSTON. Then the ordinary young man can not learn to be a plate printer by walking through the bureau?

Senator SMOOT. No; only men can do that.

Mr. BEACH. I will not admit that Mr. Bates was a plate printer or that Mr. Kendig or anybody else was a plate printer.

Mr. RALSTON. In the appointment of men from the Civil Service Bureau as plate printers, what experience are they required to have before their applications can be considered?

Mr. BEACH. They are supposed to have some experience in plate printing, but the trade is divided into three branches.

Mr. RALPH. Mr. Beach, may I interrupt you a moment. They are supposed to have the qualification of having served a four years' apprenticeship in their minority.

Mr. BEACH. Yes; they have to serve this time.

Senator GALLINGER. Then as a matter of fact, the civil service in this matter is practically a fifth wheel to a coach. It does not amount to anything. The civil service really has no facilities for determining the question as to the capacity of these men except as a matter of experience?

Mr. BEACH. The application blank has certain questions and they are to be answered by the person making application and those questions are framed to bring out the technical features of the trade. For instance it would say, "What thing do you have the most difficulty with in your printing?" That is a matter with which one man may have difficulty with and another may not. One man may say "My greatest difficulty is overcoming creases in the paper."

Senator GALLINGER. Who formulates those questions?

Mr. BEACH. I think the Civil Service Commission made them through an agreement. I do not know how they arrive at those questions. I was not an officer of the union at the time.

Mr. RALPH. Those are agreed upon by the director of the bureau and the representatives of the plate printers' union.

Senator GALLINGER. A man's experience is taken into consideration, and he must have served an apprenticeship of four years?

Mr. BEACH. The rule is that they must serve an apprenticeship of four years under the supervision of a competent journeyman.

Senator GALLINGER. How long has that been the rule?

Mr. BEACH. I could not say, certainly.

Senator GALLINGER. Do you know whether this example that Mr. Ralph alluded to was a man who got in through fraud?

Mr. BEACH. My information is that he did come in through fraud, and he was afterwards prosecuted and, I believe, sent to the penitentiary for the fraud.

Mr. RALPH. The fraud was discovered by one of your predecessors, Mr. Beach.

Senator SMOOT. Do I understand from what you have said that, as far as the union is concerned, they are perfectly willing that Mr. Ralph should take all the apprentices there now that could be used by him?

Mr. BEACH. How do you mean?

Senator SMOOT. That is, you do not think it is necessary to have a limit of 1 in 10?

Mr. BEACH. I say there is a necessity for a limit to overcome conditions in the trade. The labor movement in this country has to be studied very closely and, of course, we do not look at it as men do who are in commercial pursuits. We look at it in connection with the future that is before the workingman and the possibility of his retaining his average living and not having other men come into the trade and cut wages down. We favor the appointment of apprentices in all the branches of the trade, and we fix the time for them to serve. In the Bureau of Engraving and Printing when an apprentice comes in he works in all the various departments. He commences, perhaps, down in the oil room—

Senator SMOOT. The only thing that I wanted to get at, in order that I might not labor under a misunderstanding, was as to whether you said you were perfectly willing to have that percentage of apprentices—1 to 10—cut down. Did I misunderstand you?

Mr. BEACH. No, sir. Speaking for myself, without consultation with the executive board, I should say that for the purpose of preventing embarrassment to the Government in getting out its work, we would immediately agree to the appointment of apprentices and make that quota 1 to 5, for instance. After a boy is in the bureau for one year he is put on the press and he begins to turn out from 600 to 800 sheets a day, depending upon the limitations of the department and the ability of the boy to print. Some of the boys get along better; some have been deprived of the opportunity of printing all they wanted to.

Senator SMOOT. So that if Mr. Ralph wants to double the amount of apprentices now, as far as you personally are concerned, you would not object to it?

Mr. BEACH. If the bureau is or should be embarrassed in getting out the work, I should say we could reach some amicable settlement in that way that would settle the question as to obtaining men. Mr. Ralph raised the point that he could not get men, and I combat that by saying we could have more apprentices.

Mr. RALPH. An apprentice would not be qualified to work on the power presses for at least a year.

Mr. BEACH. On the hand presses, you mean?

Mr. RALPH. On the hand presses or on any other press.

Mr. BEACH. It has been the general understanding that a boy shall work there a year before he goes on the press.

Mr. RALPH. I want to establish the fact, Senator, that we get the best printers. We aim to give them an education and experience in the wetting of the paper, in the burning of the oil with which we manufacture the ink, in the ink mill, in the mixing of the ink, and all that. It is a well-known fact that the printers who serve their apprenticeship in the Bureau of Engraving and Printing are a much higher class than those who learn their trade outside.

Mr. RALSTON. You do not think, after all, that one day will do it?

Mr. RALPH. I certainly do not; but I want to establish this fact, Senator, that if I took 120 apprentices into the bureau to-morrow their services would not be available before one year. Then we limit the number of sheets they shall print, so that we would get no immediate relief by increasing the number of apprentices.

Senator GALLINGER. The estimates are made for one year, are they not?

Mr. BEACH. The estimates are made for the fiscal year. If the boys were put in now, when the fiscal year came along those boys could be on the press and turning out work. Then men can be employed from other cities, but they would have to be given permanent employment. They can not come down for work that is of a temporary character. If they come at all, they must bring their families and make their homes here.

Senator GALLINGER. Mr. Beach, I want to ask you this question as a friend of the workingman. There is rather a dearth of plate printers in the country, is there not? Do I understand that correctly?

Mr. BEACH. The business of plate printing has not, outside of the Government departments and the American Bank Note Co., increased very much. The picture branch of the trade is getting away, and a good deal of the work as far as card printing—dry printing, we call it—has fallen off, except at certain seasons of the year. But there are practically as many working in the large cities of the country now as there were 10 years ago.

Senator GALLINGER. What I was getting at is this: If there is a scarcity of plate printers, do you anticipate any very great hardship—so far as loss of employment is concerned—supposing it was deemed advisable to change from hand presses to power presses?

Mr. BEACH. I do not know that I gather just what you want to get at, Senator, from that question. You mean the effect it would have in the bureau as compared with the country at large?

Senator GALLINGER. In the bureau. I am talking about the bureau, now.

Mr. BEACH. There would be hardship to the trade if any number of men were to be put out of employment, of course.

Senator GALLINGER. Do you think many would be affected?

Mr. BEACH. If machinery were adopted?

Senator GALLINGER. Yes.

Mr. BEACH. Yes, sir.

Senator SMOOT. But by reducing it 20 per cent each year, it would not be felt to any great extent, would it?

Senator GALLINGER. That is the very point I want to get at because it will have a good deal of influence on my mind.

Mr. RALPH. I have gone on record and answered a question by Mr. Ralston to the effect that 20 of my men were inefficient. I want to correct that and state that those 20 men are now employed there temporarily, and that I am compelled to appoint men temporarily, who have repeatedly been discharged for inefficiency; but, in order to execute the work and on account of my inability to secure competent men for temporary employment, I am compelled to retain inefficient men.

I want to say, further, that if Congress should repeal this act and authorize me to introduce power presses, under the Smoot bill, not one man on the permanent rolls would lose his position. All these men would have permanent employment indefinitely because, while the Senator's bill provides that one-fifth of the work shall be transferred to power presses each year it does not make it mandatory to transfer that amount of work each year, and it is reasonable to assume that any administrative officer would have the same sympathy with the men and the same respect for the men of the Bu-

reau of Engraving and Printing, as I have, and that he would exercise that same discretion.

Senator GALLINGER. Now, Director Ralph, one other question on that line: Is there any danger or probability that if this change was made there would be a reduction in the earnings of these men?

Mr. RALPH. Absolutely none, Senator.

Senator GALLINGER. I think there has been a fear expressed in certain quarters as to that.

Mr. RALPH. I can not speak of my possible successor, but I believe Mr. Beach will express himself of the opinion that he has full confidence, as long as I am the administrative officer of the Bureau of Engraving and Printing, that no plate printer will suffer a reduction in salary. I do not believe those men are overpaid. It is hard, laborious work, much harder than anyone would have an idea of from observation. I know it is a physically laborous work, and I believe that they earn all they receive, both on hand and power presses.

Senator GALLINGER. I think observation would show that. As I saw it, it certainly impressed me as being the hardest kind of work.

Mr. RALPH. Therefore I can say with all assurance that if the power presses were introduced to-morrow, I would begin operations of printing by power presses only in such units as would not jeopardize the position of anyone.

I spoke a moment ago about inefficient men. I had in mind temporary men. I have taken on temporary men, because I could not get efficient men. I have taken on men that have been discharged two or three times, and one of the temporary men I have taken on I was compelled to recommend for discharge yesterday, because he has not worked since pay day.

Mr. Chairman, before you adjourn, I would like to establish just one thing. Mr. Beach, the men employed by the American Bank Note Co., of Ottawa, Canada, who print these Canadian notes on power presses, are members of your organization, are they not?

Mr. BEACH. Yes, sir.

Mr. RALPH. Are they paid union rates?

Mr. BEACH. They are paid the scale agreed upon by the union in Ottawa.

Senator GALLINGER. Are they engaged in the same work as the American workmen, and do they get the same rate of pay?

Mr. BEACH. For plate printers, the scale of wages in the different cities is regulated by the local organization and not by the international body, and they take into consideration the conditions existing in each of these cities. The cost of living in Philadelphia is a little less than in New York and the rate is a little lower.

Senator SMOOT. The committee will stand adjourned until 10 o'clock Monday morning.

Thereupon, at 2.15 p. m., the committee adjourned until 10 a. m. Monday, February 5, 1912.

MONDAY, FEBRUARY 5, 1912.

COMMITTEE ON PRINTING,  
UNITED STATES SENATE,  
*Washington, D. C.*

The committee met at 10.10 a. m.

Present: Senator Smoot (acting chairman) and Senator Gallinger.  
Senator SMOOT. The committee will come to order. Mr. Ralston, we closed our hearing Saturday when Mr. Beach was on the stand.

Mr. RALSTON. I want to ask Mr. Beach to resume the stand.

Mr. Ralph stated he would have the other 35 impressions here this morning.

Mr. RALPH. We will produce them at the proper time.

Mr. RALSTON. I submit to the committee that the present is the proper time.

Mr. RALPH. When I put Mr. Ferguson on the stand I will produce them.

Mr. RALSTON. I submit to the committee that we are entitled to the benefit of those impressions now. Part of them were produced by Mr. Ralph originally and all of them should have been produced so we could have had a fair opportunity to inspect them.

Senator SMOOT. What is your object in asking Mr. Ralph to present them while Mr. Beach is on the stand?

Mr. RALSTON. I am not concerned with having them presented particularly while Mr. Beach is on the stand.

Mr. RALPH. Mr. Chairman, I will put Mr. Ferguson on the stand when Mr. Beach vacates it.

Mr. RALSTON. That will be all right.

## TESTIMONY OF S. E. BEACH—Resumed.

Mr. RALSTON. Mr. Beach, can you tell me whether greater power is exercised by the press in making the impression on steam presses than on hand presses?

Mr. BEACH. Well, my experience has taught me that it requires more pressure on the power press to produce an impression than on the hand press.

Mr. RALSTON. Have you any idea of the relative force exerted in the operation of printing on the two styles of presses?

Mr. BEACH. I have never had any means of measuring the exact pressure to the square inch or otherwise; but experience with material that had been used on the hand press and the power press has shown that the higher pressure on the power press would destroy that material more quickly than on the hand press.

Mr. RALSTON. You speak of destroying the material. In what way does it destroy the material?

Mr. BEACH. Well, for instance, while I was employed on a power press, we tried the same thin rubber that is used on the hand roller presses; that will last for a month or six weeks and sometimes a year without breaking. The same rubber when put on a power press on a flat plate without any packing under the plate to increase the pressure will not last for more than 60 sheets; sometimes possibly 100. Then it would crease in various parts and burst—be torn apart.

Mr. RALSTON. Do you use different rubber?

Mr. BEACH. Instead of rubber on the power press they used a thick piece of leather at one time; but that has been discontinued.

Mr. RALSTON. What do they use now?

Mr. BEACH. They do not use anything between the face blanket and the backing that I know of at this time.

Mr. RALSTON. What was the effect of the superior power of the power press upon the paper which is printed upon it?

Mr. BEACH. Well, there was considerable stretching of the paper in the printing, and when we had the leather in there there was considerable hardening of the paper, as far as I was able to judge.

Mr. RALSTON. On which side was the hardening, on the side receiving the impression or on the reverse side?

Mr. BEACH. I think it was on the reverse side.

Mr. RALSTON. When you harden the surface of the reverse side, does it or does it not interfere with future printing upon such reverse side?

Mr. BEACH. I myself have never printed on any paper that had been printed prior to the time of the second printing on the power press, and I do not think I could say from experience anything in regard to that particular thing.

Mr. RALSTON. I will ask you hypothetically, then: Suppose the surface of the paper should be exactly calendered by the superior pressure brought against it. Can you print on the calendered surface as you can on the ordinary surface of the paper you use in the bureau?

Mr. BEACH. Not as well, because in printing by the hand press the effort is made by the printer to raise the nap and the surface of the paper to take the ink out of the fine lines. If the paper is hard you can not do that as well.

Senator SMOOT. Do you know how paper is calendered?

Mr. BEACH. How do you mean, sir?

Senator SMOOT. What process does paper pass through to be calendered?

Mr. BEACH. Well, I should imagine between iron rollers.

Senator SMOOT. It is passed between two iron or steel rollers?

Mr. BEACH. Yes.

Senator SMOOT. That is not the case in printing on the power press, is it? One is a roller and the other is a pad?

Mr. BEACH. No; the paper is put against the plate.

Senator SMOOT. Certainly, it is against the plate; but I say it is not calendered—it does not go through two heavy steel rollers?

Mr. BEACH. Well, I should say calendering in substance would be made in corresponding degree to the hardness of any substance it passes through; if pressure is exerted upon it it would harden to that degree.

Mr. RALPH. In calendering paper is not one roller run faster than the other in order to have friction, and in the printing from a plate at the Bureau of Engraving do not the blanket and the plate pass at the same speed so that there is no friction?

Mr. RALSTON. There is a hardening result upon the printing though.

Mr. BEACH. I think so; but I have never made a test to try to find out.

Mr. RALSTON. Now, you moisten your paper, do you not?

Mr. BEACH. On the hand press?

Mr. RALSTON. Yes.



Mr. BEACH. In addition to its having been wet in the wetting division prior to that time; yes, sir.

Mr. RALSTON. Will a hardened surface on the paper take equally the dampening?

Mr. BEACH. No, sir.

Mr. RALSTON. And if paper is not equally dampened, what is the effect upon the printing?

Mr. BEACH. You get a very uneven impression. If the paper is more wet in one part than in another, the part most wet will take the most ink and have a thicker appearance.

Senator SMOOT. The process of dampening the paper to-day in the bureau is very much better than it used to be, is it not?

Mr. BEACH. I would not say that it was.

Senator SMOOT. There has been no improvement made at all?

Mr. BEACH. I do not think any improvement can be made over the wetting of paper by the hand method, notwithstanding the fact that they have introduced machines for the wetting of paper with which they have had a great deal of trouble. Whether that trouble has been eliminated, I do not know positively; but I do not think so.

Senator SMOOT. If they had not eliminated that trouble, do you think they would go on wetting the paper with the machines?

Mr. BEACH. I think they would go on experimenting.

Mr. RALPH. Are they experimenting now?

Mr. BEACH. I do not know.

Mr. RALPH. You can not testify as to that. Do you know whether the American Bank Note Co. has installed this method after a careful investigation?

Mr. BEACH. I do not know anything about it. I know there is a great deal of trouble, and it depends upon the carefulness of the employee.

Senator SMOOT. In the hand-wetting process the paper is soured a great many times, is it not?

Mr. BEACH. How is that?

Senator SMOOT. It becomes moldy and musty and is not as even as the wetting is done to-day by the present process.

Mr. BEACH. I do not know that the paper would become moldy. If the rags were not laundered sufficiently and men were careless with them they would get moldy, but that would be the fault of the wetting division, because they could be kept clean.

Senator SMOOT. That does not happen at the present time.

Mr. BEACH. Well, I can not see, Senator, why that would have any effect on the wetting of the paper as far as printing is concerned. Of course, I do not mean to argue with the Senator in regard to the matter, and I am simply attempting to bring out the views we are attempting to get out.

Mr. RALSTON. Mr. Beach, are there any considerations about this matter upon which you would like to make a statement?

Mr. BEACH. As to the wetting or the process of printing?

Mr. RALSTON. As to the whole subject matter.

Mr. BEACH. Well, I would like to make a few remarks in regard to the distinguishing differences between power-press printing and hand-press printing; but I would rather reserve the description of the two methods until a later time, if there be no objection, because I would rather hear more of the testimony before I could give these distinc-

tions. It is in connection with the practical operation in both methods that was touched upon Saturday a little.

Senator SMOOT. Do you mean to say that the testimony given here will influence your judgment as to the difference between the two processes?

Mr. BEACH. No, sir.

Senator SMOOT. Then why not make your statement now?

Mr. BEACH. I can do so if it is desired.

Senator SMOOT. It seems to me it would be just as well.

Mr. BEACH. What I wanted to do, Senator, if you will permit, was to collect some notes. I have been very busy since I was here last Saturday.

Senator SMOOT. That is another proposition entirely. As far as I am concerned I am perfectly willing you should have all the time to collect your notes that you desire.

Mr. BEACH. My notes have been made in the course of the testimony, and I have not been able to get them in proper order. There are some things I might overlook, and I want to prevent coming back here several times.

Senator SMOOT. I thought you were so well informed as to the difference between the two processes that you would not have to rely upon any testimony given, and that you would speak from your own knowledge.

Mr. BEACH. I believe you are correct about that. I believe I am competent to testify. I submit myself to the Director of the Bureau if there is any question in regard to that. I can describe it right now.

Mr. RALPH. I suggest that if there is anything Mr. Beach wants to bring out he can do it in cross-examination if he is not on the stand. He consults very freely with Mr. Ralston.

Senator SMOOT. While you are on the stand you can state anything you please. If you desire to get your notes together you can make a further statement at a later time.

Mr. BEACH. I will go ahead, briefly.

Well, in the first place, the beginning of the operation of plate printing on the power press is the filling of the plate. That is done by a roller which lays under the ink fountain, and which is fed through the side of the fountain by means of an edged knife, which regulates the ink feed. Now, that roller passes over the plates one time. There is no opportunity, if in the event of the roller failing to fill in—any part of the roller—to adjust that, as there would be on the hand press.

The man operating on the hand press has a roller the shape of which is somewhat like a pastry roller, and he can pass up and down the plate as often as he pleases, and the usual custom is for a man to go over each part of the plate at least twice, while, as I say, on the power press the roller passes one time over. In order that the wiper may be able to wipe the plate clean enough so that the man can polish it without the use of a rag to wipe the surplus ink off, the ink in the fountain is thin or of less consistency than in the hand-press printing methods. Then this ink being thin, does not fill the lines as fully as it can be done by the hand roller. Consequently in the beginning of the operation you have not the plate as full of ink as it should be. If the plate is filled in to the fullest and passes under the wiper, it is necessary in order to get that ink off thoroughly to screw the wiper down or tighten

it against the plate, which then takes off more ink than it should, and it wipes out the deep lines.

Mr. RALPH. Are you testifying as to the American Bank Note Co.'s power presses or the power presses at the Bureau of Engraving and Printing?

Mr. BEACH. I never worked at the American Bank Note Co.

Mr. RALPH. You exhibited a Canadian bank note to show the inferior quality of the printing.

Mr. REACH. I do not understand what the director is asking.

Mr. RALPH. The notes you exhibited here—Canadian bank notes—you exhibited as poor quality of power-press printing. You have not exhibited any results of the power-press work of the Bureau of Engraving and Printing, and when you are called upon to pick out the revenue stamps printed on power presses, inked as you say they are, wiped as you say they are, you can not do it.

Mr. RALSTON. I think the witness should be allowed to continue without any interruption.

Senator SMOOT. I think you had better let him go ahead and Mr. Ralph can ask any questions he desires after he has concluded.

Mr. BEACH. I should say that on account of screwing this wiper down tightly on the surface of the plate over which this wiper passes, the thickness of the rag takes out the ink from the heavy lines. Now may I ask if I may use the photographs Mr. Ralph used as a part of his statement the other day in order to demonstrate to the committee? [Showing photographs to the committee.]

The operation of filling in the plate is shown by this photograph, marked "No. 2" entitled "Inking the plate on power press," and it shows a single roller passing over the surface of that plate. It can be seen here that the roller on the rear, before it passes the plate, is made of a substance somewhat similar to the hand roller used on a hand press, and in passing over the plate, if you put enough ink on that plate to print by the hand-roller process, the hand process, the wiper has to be screwed down in order to take that surplus ink off, and that wiping is done by this appliance on this side [indicating], which weighs, I should say, 200 pounds and perhaps a great deal more, and it is fastened by tension screws with springs adjusted so that it can be put down on the plate.

Senator SMOOT. It can be made to bear on the plate lightly or heavily?

Mr. BEACH. Yes; it can be light or heavy. It is necessary to put it down hard enough, however, so that the polishing on the other side can be done. That wiper wipes back and forth over this plate, when the wiper passes over the surface of the plate. Now, the tighter that wiper is put down on the plate the more ink it takes off the plate. Thereby when you put pressure on the line, instead of being full of ink, has some taken out, but as the hand wiping is done it is clean and sharp. With the pressure on, on certain classes of work it has a hollow appearance, and, as we term in the trade, it takes the ink from the top of the lines instead of leaving the ink full in the line, as it can be done on the hand press.

After passing through the wiper the plate comes to the printer, as shown in this photograph marked No. 3, and the man polishes in that manner. [Indicating.] The plate then passes from him to the girl who lays a sheet on. If the ink is too thick on this plate to polish, the

man has to stop his press and resort to the rag, or if the ink is running too heavy he has to use a rag in his left hand and polish with the other. Of course to do that on a press is very difficult work and the men seldom resort to it. The more this is lengthened to the right or left the more ink it takes out and the tighter it is pressed down against the plate the more ink it takes off.

In the hand-roller process the man uses a roller such as you see in this picture No. 1, and he charges that roller until he thinks he has sufficient ink on it to carry it across the plate and fill in all the lines properly. Then he lays his roller aside and he takes his rag, as I demonstrated Saturday, and he folds it and he breaks the surface of the ink. That is, he uses two hands to carry the rag across the surface of the ink and makes the rough wipe; then he turns the rag to the smooth side and with a padded rag of that character continues to wipe the ink until he gets it down sufficiently to polish. By examining this with a glass I find that the ink is hollowed out on the power-press plate, and an examination of the lines on a hand-wiped plate will show that the ink stands up full, but if the former happens with the man in the hand-roller process he can adjust himself to the conditions as they exist. We have in the trade what we call a close wipe and a full wipe. For instance, if it is necessary the man will wipe full and if it is necessary he will make a close wipe. If the paper happens to be a little wet on one side he would give it a close wipe in order to avoid what we call a mashed appearance in the work. With the power press it is impossible to do that; to adjust the work to the conditions.

Then a man after wiping a plate with one hand instead of with two polishes the plate in this manner by putting whiting on his hand—wiping it on a rag which he has on his side, or on a piece of this blanket, and he adjusts that surface to the condition of the plate. If the ink is full he polishes closely. The color of that impression depends upon the method by which the plate is wiped and the method by which the plate is polished. After the man finishes the wiping of the plate on the power press or the polishing of the plate, the plate passes to the girl and she lays the sheet on, as is shown in picture No. 4. It passes under this roller. Now, in 1885, when they had these presses—

Senator SMOOT. Let me ask this question so that I can understand the matter. You say a great deal depends upon the wiping and polishing of the plate?

Mr. BEACH. Yes, sir.

Senator SMOOT. Then if there were 800 men doing that work, no two men would wipe and polish the same?

Mr. BEACH. No; no more than any two artists would paint a picture alike.

Senator SMOOT. Then there would be no certainty—even on account of the wiping and polishing—there would be no uniformity, would there?

Mr. BEACH. Just the same uniformity if we had 25 artists to paint a certain picture. They might use different methods, but the results would be similar. It would not be different.

Senator SMOOT. Of course, it could not be the same, could it?

Mr. BEACH. I do not believe, Senator, that any two things in the world are exactly alike.

Senator SMOOT. But do not you believe at the same time that it would be closer by having it go through a machine than it would be to have a great many wipers and polishers to do the same work, if you wanted to get a similarity?

Mr. BEACH. Well, I should say, if I wanted to get a uniformity of bad work I would put it on the power press to get that, but if I wanted to get good work I would print it on the hand press.

Senator SMOOT. But they would be all different; there would be no similarity.

Mr. BEACH. I think it would be the best that could be produced, just the same as we can take a painting and reproduce it by any method whatsoever. You can get a machine print, which is a similar thing, but the same artist could not duplicate it to save his life. I do not consider that as any great distinction, because the original painting would be the most valuable and the best of all.

Senator SMOOT. That is not what I was speaking about. I asked you a question and you have gone off on another subject entirely. I asked you as to the similarity of the work. The similarity of the work would be more uniform on a power press than on a hand press, judging from your description.

Mr. BEACH. Generally speaking, there would be more uniformity, you mean?

Senator SMOOT. The whole thing would be more uniform?

Mr. BEACH. The work is uniformly light if it is run light; uniformly mashed if it is run mashed due to conditions, or it is uniformly bad due to other conditions on the power press. And it will continue for a greater length of time on a power press than on a hand press. For instance, if a man on a power press finds his work is going badly he will print 40 or 50, while on a hand press it will be corrected immediately.

Senator SMOOT. Do you mean to say that a man could not stop a power press within less than a hundred impressions?

Mr. BEACH. No, sir.

Senator SMOOT. He could stop it immediately if he found it was going wrong, could he not?

Mr. BEACH. He could stop it immediately; but the conditions do not adjust themselves on the machine as readily as they do on the hand press.

Senator SMOOT. Why would not that man use the same judgment on a power press as the man on a hand press if he knew it was going wrong, and correct it?

Mr. BEACH. It is impossible to adjust the machine immediately.

Senator SMOOT. But he could stop it immediately?

Mr. BEACH. Not without—the result would be the same.

Senator SMOOT. Now, if a man runs a machine he knows something about it or he would not be there?

Mr. BEACH. The officials of the bureau have testified here that it takes a day or three or four days to get a job going.

Senator SMOOT. But it does on a hand press too, does it not?

Mr. BEACH. Yes; to get a job going on the hand press; but we adjust conditions more rapidly on the hand press.

Mr. RALSTON. Let me ask this question in the line of uniformity: Is there uniformity between the different power presses?

Mr. BEACH. All of them doing the same work?

Mr. RALSTON. Yes.

Mr. BEACH. No two men work alike on a power press any more than on a hand press.

Mr. RALSTON. Then the uniformity, as I understand you, only extends to the particular jobs going through the particular press; so that, as a matter of fact, there is no uniformity on a press impression even to-day?

Mr. BEACH. No, sir.

Mr. RALSTON. Again, in order to have uniformity, even on power-press impressions, you have to have plates that have had exactly equal work, do you not?

Mr. BEACH. Yes, sir.

Mr. RALSTON. So that on a new plate on one power press and an old plate on another power press you are going to get different results?

Mr. BEACH. Yes, sir; and you can have four different kinds of plate on one power press and get a different result at the same time.

Mr. RALSTON. You can have four different plates on one power press and get a different result at the same time?

Mr. BEACH. Yes, sir.

Mr. RALSTON. Then if there were half a dozen presses, each with four plates running on the same job, you would get 24 different uniform results, will you not?

Mr. BEACH. Yes, sir; it is possible.

Senator SMOOT. It makes no difference whether the plate is old or new on the hand press, does it?

Mr. BEACH. Oh, yes; it makes a difference all the time.

Senator SMOOT. Then that same principle applies to a hand press as well as to a power press?

Mr. BEACH. No, sir; because with the hand press I can produce results so as to produce a better impression than on a power press. Under an experiment with old plates on a power press that were ready to be discarded and ought to have been thrown away, they have been filled in with the hand roller and wiped with the hand rag and produced a sheet that was four times as good as the power press had been producing.

Senator SMOOT. That is only a question of renewal, then, is it not—a replacing of a plate?

Mr. BEACH. No; it shows that the power press can not produce as good work as you can by the hand methods.

Senator SMOOT. You mean a worn plate?

Mr. BEACH. Yes; a worn plate.

Senator SMOOT. Do you think that Director Graves, in stating there were 163,000 impressions taken on a power press before the plate was discarded, was correct?

Mr. BEACH. Do I think that he was wrong? Oh, no. It is possible to take a million, perhaps more, before a plate is discarded. It depends upon the requirement of the man in charge.

Senator SMOOT. You do not think that a man would use a plate, do you, when it was not fit to be used?

Mr. BEACH. Yes, sir.

Senator SMOOT. You think that would be done?

Mr. BEACH. I know it has been done in the bureau when they were not fit to be used. I have printed them when they were not fit to be used.

Senator SMOOT. Whom did you object to?

Mr. BEACH. I have called the attention of the foreman to it and have heard him say, "Go ahead; we have not any other plates here."

Mr. RALPH. What job was that, Mr. Beach? Was that the job you referred to in Senator Smoot's office—bottled distilled spirits?

Mr. BEACH. No; postage stamps, for instance.

Mr. RALPH. Was that the Sunday when you attended a conference in Senator Smoot's office at which Mr. Foster was present, and you made a statement before the chamber of commerce, when Senator Smoot, Mr. Ferguson, and myself were present, and you elucidated the difficulties you had had with the bottled distilled spirits stamps? You stated you could not print the vignettes and you called attention to the job—is that the one you have in mind?

Mr. BEACH. That is one of them.

Mr. RALPH. Do you know that that work was given to Mr. Orspada after you failed to get good work and that he turned out a perfect impression?

Mr. BEACH. That is not the question I was hitting on.

Senator SMOOT. If that was true, it would have an effect on the question.

Mr. BEACH. No—

Mr. RALSTON. Would that amount to more than that one press at one moment might print a particular plate while another press would not?

Senator SMOOT. No, it would amount to this, that the operator did not have his machine so that he could bring out the impression that was required and another operator could.

Mr. BEACH. I want to say this now in justification of the remark Mr. Ralph has just made in disparagement of my ability to print. I will ask you if Mr. Ralph did not qualify me that day and say to Mr. Foster, "You have brought one of your best men over here to testify."

Senator SMOOT. I do not doubt that.

Mr. RALPH. If I did not state it, I shall do so now, but I want to bring out the fact that one man has difficulties with work that another man overcomes. Some men are more expert on a particular job than other men.

Mr. BEACH. Where was I?

Senator GALLINGER. You spoke of 1895.

Mr. BEACH. I was going to speak about this roller. The printing on this press to-day is identically the same as on the hand press and the adjustment of the blanket is exactly the same, except that in 1895, when they had the other presses at the bureau, these blankets were swung on a galley which was on a frame and dropped back each time. It was stated the other day that it was an improvement in the roller and that this was an idler. The printing operation has not been changed except that in the mechanical adjustment of the press, instead of the blankets running on this galley they are set on this roller and that roller passes over a chain on a shaft pulley and continues to turn. There is no difference except there is more pressure than there would be if that plate were filled in by hand. I made a test on a power press and I have found that by filling the plate by hand and wiping it with a hand rag under the general conditions with which the plate is operating I get a thick, heavy, mashed impression and that it is pos-

sible to raise the pressure screws on each side of this roller by turning them an inch and a half, or possibly 2 inches, thereby raising the pressure. Under the condition that press is run at the time it is working, under the general condition of power-press work, I do not know just how much difference that makes in printing; but I do know that it takes off a considerable pressure from the surface of the paper and the plate, and that the plate will print better by filling it in by hand and wiping with the rag than by leaving it as it comes and passing it through.

Something was said in regard to the improvement of the wiper, and there has been improvement made in the wiper in the adjustment of the rag; but the press on which Mr. Flaherty is working did that, and he testified that it was one of the presses in the bureau in 1895. There have been no changes made on those wipers excepting in the adjustment of springs and bolts. The rag is unwound and wound up just the same as it was at that time and the printing is exactly the same as it was at that time. I do not know of any other improvement as to this wiper. The only difference they have made is instead of having to lift the wiper to take the pad out they have made it come out like a drawer in the rear. It was said by Mr. McKinney that in lifting that pad out it got the press out of adjustment. If that is so, there is nothing to the statement that a man can adjust his press according to conditions. The only thing that did occur was that the machinist in raising or lowering sometimes let it get either to one side or the other and that would cut that screw that holds it—the journal—but there was nothing difficult on the part of printer in getting his wiper back to the place where he wanted it.

One more thing I might say in regard to this process—due to the operation of that wiper. It was shown here the other day that the forward part of the plate is wiped out more closely than the other part. To overcome that, printers put what we call a “step patch” in here. That is perhaps four thicknesses of tissue under the front edge of the plate, and then graduating down to three, two, and one thickness. To overcome the wiping clean of that portion of the plate, more pressure is placed on this edge of the plate than on the back. But that difficulty can not be overcome in any way whatsoever on the power press.

Mr. RALSTON. What is the result of this work on the plates upon the sheets produced?

Mr. BEACH. Well, one side of the sheet—the plate—after it has been worn there for some time becomes lighter, and you can not get the volume of color on that side that you get on the other.

Cross-examination by Mr. RALPH:

Mr. RALPH. In describing the process of inking in, you said there was only one roller. Do you think a press with more than one roller would ink in better?

Mr. BEACH. I do not think so, because it was tried in the bureau and was stopped. The ink was picked out of the line and they were thrown away, although I can not say so from experience. You can not put any more ink on than the wiper can wipe off.

Mr. RALPH. Here [indicating] is a power press such as they have in Cuba. That has three ink rollers. You do not think that three ink rollers would, then, improve the inking of the plate?

Mr. BEACH. I do not know. I never tried it. I could not give an experienced opinion unless I tried it.



Mr. RALPH. If one roller did not distribute enough ink in, three rollers certainly would distribute considerably more?

Mr. BEACH. If each roller had an equal amount on, but I could put as much ink on one roller as I wanted. It is not a question of the quantity of the ink, it is a question of taking it off. You can put so much ink on the plate that the wiper can not take it all off.

Mr. RALPH. What is the difference between the process in the Bureau of Engraving and Printing and the process by which the Canadian notes are printed?

Mr. BEACH. If you will give me a photograph of them I will distinguish them. I have not been at the works of the American Bank Note Co.

Mr. RALPH. But you have heard that they use a burlap rag on the presses, have you not?

Mr. BEACH. Let me see a piece.

Mr. RALPH. You have seen a piece, have you not?

Mr. BEACH. I have never seen any; no, sir.

Mr. RALPH. You know what it is, do you not?

Mr. BEACH. I have heard of it, but I have never seen it. I will say that in conversation with men who have worked there I have been told that they do not use burlap on the plate.

Mr. RALPH. You have heard that they use the hand rag?

Mr. BEACH. I do not know; no.

Mr. RALPH. They do use the hand rag; that is a part of the business.

Now, you have distinguished between the two processes and you have stated that in the power-press process the inking in is not sufficient and that the power-press work lacks uniformity and that hand-press work is superior. You have worked on both classes of work, have you not—on proprietary stamps?

Mr. BEACH. Yes.

Mr. RALPH. Is not that a fact?

Mr. BEACH. Yes.

Mr. RALPH. And now, with revenue stamps made on the power presses and stamps made in the engraving division under the most favorable conditions by the best printers, you can not pick them out there and say wherein they are wiped out on the edges or wherein they are deficient in color strength and not up to the standard in tone?

Mr. BEACH. I will pick out the good and bad impressions; but I will not attempt to tell you whether one is printed by power press or by hand press.

Mr. RALPH. If it is so lacking in uniformity you would have no difficulty in doing so, would you?

Mr. BEACH. The power-press impression?

Mr. RALPH. Now, Mr. Beach, I am not putting in sharp practice on you. This is a gentlemen's contest. We did not go to work and have some poor printer execute the hand-press impression and then we did not temper the work or select the work from the power presses as the best possible work; but we had a man in the proving room print those impressions.

Mr. RALSTON. Is this a question or evidence?

Mr. RALPH. Well, I will submit it as evidence if you desire. It is a fact which has been established in evidence here. If Mr. Beach testifies that the work is so uniformly inferior, why in the world can not we

take the evidence, the product of the presses, and determine it upon that?

Mr. BEACH. Because you have not got the general product of the presses here.

Mr. RALPH. Well, I will tell you what we will do, Mr. Beach. I suggest to the committee that you be permitted to come down and make selection from stock and we will put it in comparison with that.

Mr. RALSTON. For the purpose of proving what?

Mr. RALPH. To prove that the result of the power presses on internal-revenue stamps is equal to the hand presses.

Mr. RALSTON. What revenue stamps have you?

Mr. RALPH. Anything you choose—tobacco, or any of them. We can have your expert printers in the proving room take the impression under the most favorable conditions.

Mr. RALSTON. What revenue stamps have you on the hand press at the present time?

Mr. BEACH. We have not any, but they have printed plates in the proving room.

Mr. RALSTON. When were these done?

Mr. RALPH. About January 20, 1911.

Mr. RALSTON. They were printed for the purposes of comparison?

Mr. RALPH. The hand-press impressions were.

Mr. RALSTON. Who was the printer?

Mr. RALPH. Mr. Edward Ryan.

Mr. RALSTON. And was the plate an old one or a new one?

Mr. RALPH. It was a new one.

Mr. BEACH. It was a new plate. You do not print from new plates all the time, do you?

Mr. RALPH. No, sir; but the power-press plates were not new.

Mr. BEACH. What is the general condition on the power press? Don't you take the average condition of the plate and not the newness of it?

Mr. RALPH. I will bring that out in Mr. Ferguson's testimony.

Mr. BEACH. I do not think to hand a man 5 or 10 sheets is a fair test. I will undertake to tell you the good impressions in this work.

Senator SMOOT. That would be only an opinion. It could not be proved in any way other than by just simply saying, "I think that is one." Now, you say that the power-press work is generally bad and that the hand-press work is generally good. If that is the case, it seems to me that it would be very easy indeed, as Director Ralph says, for you to point them out just as quickly as it comes to your notice, being an expert in this work.

Mr. RALSTON. Let me ask Mr. Ralph who made the selections of this power-press work?

Mr. RALPH. When Mr. Ferguson takes the stand we will bring all that out.

Mr. RALSTON. Do you object to doing it now?

Mr. RALPH. I can not answer that question; I don't know who made the selections. He supervised that.

Mr. RALSTON. Were these selections made all from the same package?

Mr. RALPH. I could not answer that question.

Mr. RALSTON. Were they selected one after the other?

Mr. RALPH. I say I can not answer that question. I did not witness the selection and know nothing about it.

Mr. RALSTON. I think before we are asked anything about it we ought to know the conditions under which they were selected, or printed, as the case may be.

Mr. RALPH. If Mr. Beach wishes to make the examination of those sheets after his testimony I will put Mr. Ferguson on the stand for that purpose.

Mr. BEACH. I am not going to undertake at any time to tell by what method this work was printed. It is no use to ask me that any more, because I do not believe that is a fair test.

Mr. RALPH. You did raise the question that the stamps printed on the power press was not a fair test because the printer wiped the plate. You admit that is a part of the conditions of power-press printing. Here is an exhibit that was printed under different circumstances. The printer did not wipe the plate. It is the average run of stock.

Mr. BEACH. Do you know that he did not wipe the plate, Mr. Ralph?

Mr. RALPH. I take it for granted that he did not.

Mr. BEACH. Well, we do not know that. I do not know. I know that about a year ago two or three printers were given a plate one morning and that they worked with it one day, and that then the plate was taken away from them. What that plate was worked for that day I do not know; I have an idea.

Mr. RALPH. I do not, either, Mr. Beach.

Mr. BEACH. But the men never knew. There was no reason for taking the old plate away from them and giving them a new plate for a day and then taking it away from them. What the reason for that was I do not know.

Mr. RALPH. We can very readily ascertain that, if we know the date.

Mr. BEACH. I don't know.

Senator SMOOT. Mr. Beach, I would like to ask you a few questions on this subject. I suppose that your only interest in this question is to make our currency more secure from counterfeiting, is it not?

Mr. BEACH. My only interest?

Senator SMOOT. That is the only reason that you appealed to Congress?

Mr. BEACH. No; that is not my only reason.

Senator SMOOT. That is what I want you to state. I want you to tell just what your reasons are for advocating that the present law shall remain in force and why you do not want the law changed as to the manner of printing currency.

Mr. BEACH. I believe that it will necessitate the loss of employment to a number of our men, notwithstanding the statement of the honorable director; and in addition to that I believe that we have a legitimate argument in the fact that to lower the standard of engraving or the standard of art as shown in the production of our notes to-day will put a premium on counterfeiting. That is my honest belief.

Senator SMOOT. You have shown the Canadian bills here to demonstrate the fact that they are not printed as well, and, thereby, are more easily counterfeited, have you not?

Mr. BEACH. I say that when the bills are not well printed, it puts a premium on counterfeiting.

Senator SMOOT. You say it is a kind of dull work.

Mr. BEACH. It is flat; it lacks life and tone.

Senator SMOOT. Have you examined into that question at all?

Mr. BEACH. As to what?

Senator SMOOT. As to the facts in the matter—why they are printed that way?

Mr. BEACH. No; I don't know why they are printed that way, except that I had to come to a conclusion.

Senator SMOOT. That is your conclusion, is it not?

Mr. BEACH. Yes, sir.

Senator SMOOT. Don't you think, being in the position you occupy, that it was your duty to have found out why that appearance, that undertone on the bills, was adhered to by the Canadian Government, and the American Bank Note Co.?

Mr. BEACH. I suppose it would, if I had thought it valuable, but I don't think it is valuable from my point of view for the reason that no matter what their reason for having it that way, it is my opinion that the notes are not as good as the notes printed under our condition.

Senator SMOOT. If the Canadian Government believes that that undertone—that dull color as you claim it to be, is a preventive of counterfeiting, would you object then to having ours the same way—if it really were true?

Mr. RALSTON. We expect to show that it is not true.

Senator SMOOT. I am asking him that question.

Mr. BEACH. If you could show me that counterfeiting would be retarded by producing our work in that color, I should say that I would not want it like that anyway, if the money printed in the present condition were just as good. That is just the reverse of the proposition you made.

Senator SMOOT. That is not what I asked you. Don't you think it is harder to counterfeit a colored piece of paper than it is a white piece of paper?

Mr. BEACH. Well, yes, because white paper is a very common thing.

Senator SMOOT. So, if there is an undertone or colored hue upon a piece of currency or upon a bank check, it is very much harder, is it not, to scratch out a portion of it and counterfeit it, or change it, than if the paper was absolutely white?

Mr. BEACH. I would like to ask the Senator what you mean by undertone?

Senator SMOOT. I mean the shading, the color of it. I don't care whether you call it an undertone or not; just simply say a shaded paper. We will not confine it to a bank note. Is it not true that in a check with a blue-tinted paper or a red-tinted paper, or a color of any kind, alteration is more easily detected than a check on white paper?

Mr. BEACH. Providing there are erasures, but—

Senator SMOOT. That is what I mean; but there would be erasures in many of our counterfeits.

Mr. BEACH. That would be an additional method of preventing counterfeiting. The production of a tint on a note would not make any difference except for the operation of producing it—so much more work to be done.

Senator SMOOT. It would make a difference, though, in case there was any change on the note, would it not?

Mr. BEACH. Yes; that would be additional protection.

Senator SMOOT. Most of our counterfeiting is done that way, is it not?

Mr. BEACH. I can not say whether most of our counterfeiting is done that way or not.

Senator SMOOT. Well, you have not looked into counterfeiting very closely, have you?

Mr. BEACH. I can not say positively at this time. I have examined counterfeiting; yes, sir.

Senator SMOOT. You have not looked up the statistics to find out?

Mr. BEACH. Not officially; but I want to say in regard to the Canadian money, to answer the other part of that question, that whenever the note, no matter whether it has a tint under it or not, or a double tint, it does not make any difference when it comes to that flatness.

That flatness is caused to a certain degree by the wiping down of the plate and taking the ink out of the lines; that is, when we consider our process here in the Bureau of Engraving and Printing.

Senator SMOOT. Of course, that is your opinion, and my opinion is, of course, that the Canadian bank note that you showed here is much more difficult to counterfeit than our own money. Of course, I am simply expressing my opinion, just as you have expressed yours.

Mr. BEACH. All right.

Mr. RALSTON. That is all, then, for the present, Mr. Beach.

#### TESTIMONY OF FRANK E. FERGUSON.

Mr. FRANK E. FERGUSON, having been duly sworn by Senator Smoot (acting chairman), was examined by the committee, and testified as follows:

Direct examination by Mr. RALPH:

Mr. RALPH. Mr. Ferguson, what is your official capacity as an employee of the Bureau of Engraving and Printing?

Mr. FERGUSON. I am the assistant director of the bureau.

Mr. RALPH. How long have you been assistant director of the bureau?

Mr. FERGUSON. Since May, 1908.

Mr. RALPH. How long have you been employed in the Bureau of Engraving and Printing?

Mr. FERGUSON. I have been employed there since 1878; not continuously; about 30 years altogether.

Mr. RALPH. In what capacity did you enter the employment of the bureau?

Mr. FERGUSON. I entered the bureau in the wetting division, engaged in wetting paper, helping around in the wetting division. I guess I was in the wetting division about 13 months altogether. Then I was transferred to the printing division and was there for about nine months. Later I was sent to the office and have been in the office ever since.

Mr. RALPH (to Mr. Ralston). Have you made a discovery?

Mr. RALSTON. I have no reputation to lose, so I suppose I can make a guess that that is a hand-press impression, No. 60.

Mr. RALPH. I think you have made a discovery, because that is the only way you can tell them.

Mr. BEACH. I knew that, too.

Mr. RALSTON. I think I can pick a good many of them.

Mr. RALPH (to the witness). You went in there as an apprentice?

Mr. FERGUSON. No, sir. I just came there as a helper.

Mr. RALPH. You worked in the printing division?

Mr. FERGUSON. Yes.

Mr. RALPH. Then you were transferred to where?

Mr. FERGUSON. To the office.

Mr. RALPH. To the administrative office. You have, then, been in the service altogether about 30 years?

Mr. FERGUSON. Yes, sir.

Mr. RALPH. Do you recall an order from the Assistant Secretary to print specimen notes on power presses?

Mr. FERGUSON. Yes, sir.

Mr. RALPH. What steps were taken to execute the order?

Mr. FERGUSON. Directions were given to the engraving division to prepare a one-subject plate, without signatures, and one subject was made in order to hurry the matter, because the Committee on Printing wanted the impressions as soon as possible. Six impressions were made in the engraving division; the plate the same day was then sent to the power-press room and 40 impressions were printed from that same plate.

Mr. RALPH. The same day?

Mr. FERGUSON. Yes, sir.

Mr. RALPH. From the same plate?

Mr. FERGUSON. From the same plate.

Mr. RALPH. There was only one subject on the plate.

Mr. FERGUSON. Yes.

Mr. RALPH. What was the object of having only one subject on the plate.

Mr. BEACH. To facilitate the work. They were in a hurry to get the impressions and the time was not wasted in cutting a full plate.

Mr. RALPH. You supervised that work entirely, did you not?

Mr. FERGUSON. Generally I supervised it.

Mr. RALPH. Who was present when the impression was made on the power press?

Mr. FERGUSON. Mr. McKinney, the chief of printing; Mr. Randall, the foreman; and Mr. Foster, chairman of the executive committee of the plate printers; and the printer and the two assistants.

Mr. RALPH. How did it happen Mr. Foster was present?

Mr. FERGUSON. When the matter came up of printing these impressions, you sent for Mr. Foster and told him, as a matter of courtesy, what you were going to do; and he said that while, of course, the printers could, if they wanted to, get out an injunction, that they were not going to make any objection, and asked if he could be present to witness the test.

Mr. RALPH. Mr. Foster requested the opportunity of being present?

Mr. FERGUSON. Yes, sir.

Mr. RALPH. I recognized the question of the legality of printing these, did I not?

Mr. FERGUSON. Oh, yes, sir.

Mr. RALPH. Why were 40 impressions printed, Mr. Ferguson?

Mr. FERGUSON. Because it was an absolutely new job on the press and it was desired to print enough to start the job properly, and that was just assumed as being enough to get out the five impressions that the Secretary ordered.

Mr. RALPH. I don't know whether I brought out the fact or not that Mr. Ryan in the engraving division printed the six impressions in the engraving division.

Mr. FERGUSON. Mr. Ryan did.

Mr. RALPH. That was done before the plate was taken down to the power press?

Mr. FERGUSON. Yes, sir.

Mr. RALPH. Was any difficulty experienced in starting the job?

Mr. FERGUSON. Nothing more than the usual difficulties of starting a job. Pressure had to be gradually applied, and then during the process of printing the ink was cut down a little.

Mr. RALPH. What do you mean by pressure? Pressure on what—on the impression roll?

Mr. FERGUSON. On the impression roll.

Mr. RALPH. After the plate was polished, ready for the impression, was the wiper adjusted?

Mr. FERGUSON. I don't recall that the wiper was adjusted, although it may have been. I remember distinctly that the ink was cut down.

Mr. RALPH. Who adjusted the impression on the impression roll?

Mr. FERGUSON. Mr. Randall.

Mr. RALPH. He was foreman of the room.

Did the printer have to use a hand rag to wipe the plate after it came from the wiper—the mechanical wiper, I mean?

Mr. FERGUSON. He did on a number of impressions. I should say probably 25 or maybe 30, but 25 surely.

Mr. RALPH. Why did he not use a rag on them?

Mr. FERGUSON. Because after the ink was cut down the press was running very nicely, running continuously, and it was not necessary.

Mr. RALPH. You say after the ink was cut down. Who cut the ink down?

Mr. FERGUSON. I think Mr. Randall.

Mr. RALPH. In the fountain?

Mr. FERGUSON. Yes; the ink was getting a little thick. It was rolling up on the plates in little balls.

Mr. RALPH. After he pulled the first impression did the printer stop the press?

Mr. FERGUSON. Oh, yes; we stopped the press to look at the impression; after practically each of the first 25 or 30.

Mr. RALPH. Mr. McKenny took the impression from the girl and you examined it?

Mr. FERGUSON. Yes.

Mr. RALPH. And then he instructed him to proceed with the printing of another impression?

Mr. FERGUSON. Yes, sir.

Mr. RALPH. Did you follow that method with each impression that was taken?

Mr. FERGUSON. We did until the job got to going pretty well. I suppose the last 10 or 15 we did not.

Mr. RALPH. So there was considerable delay in the execution of the work?

Mr. FERGUSON. Considerable.

Mr. RALPH. Did Mr. Foster observe the printing at the same time?

Mr. FERGUSON. Yes; he and I particularly were the observers.

Mr. RALPH. Did Mr. Foster protest against the man using a rag on the plates?

Mr. FERGUSON. Oh, no.

Mr. RALPH. Did he polish all the plates by hand?

Mr. FERGUSON. All except one.

Mr. RALPH. Why did he not polish that impression?

Mr. FERGUSON. Because the press was going pretty well and Mr. McKinney asked my permission to let him run it through without polishing; he wanted to show Mr. Foster how nicely the wiper was working.

Mr. RALPH. Did he wipe that with a rag?

Mr. FERGUSON. Oh, no; he did not touch it with a rag.

Mr. RALPH. He did not wipe it with a rag or touch it with his hands?

Mr. FERGUSON. No, sir.

Mr. RALPH. And that was done at the request of Mr. McKinney?

Mr. FERGUSON. He wanted to show to Mr. Foster how nicely the wiper was working.

Mr. RALPH. Mr. McKinney and Mr. Foster discussed the working qualities of the press?

Mr. FERGUSON. Yes.

Mr. RALPH. And you allowed the impressions to go through the press without the assistance or manipulations of the printer at all?

Mr. FERGUSON. Yes.

Mr. RALPH. So that impression was not wiped with a rag or polished by hand?

Mr. FERGUSON. Not with a hand rag and not polished.

Mr. RALPH. So it was the practical work of the power press minus the assistance of a power-press printer?

Mr. FERGUSON. Absolutely.

Mr. RALPH. Have you that impression with you?

Mr. FERGUSON. I have it here.

Mr. RALPH. How can you identify that impression?

Mr. FERGUSON. Mr. McKinney wrote on it and put his initials on it at the time.

Mr. RALPH. Why did he do that?

Mr. FERGUSON. Because we were marking all the impressions with Mr. Poole's name to identify them, and it would have been impossible to identify it unless he had marked it.

Mr. RALPH. He wanted to distinguish it because it was not wiped with the rag?

Mr. FERGUSON. And not polished.

Mr. RALPH. Not polished and not wiped with the rag?

Mr. FERGUSON. Yes.

Mr. RALPH. Now, will you produce that impression?

Mr. Ferguson produced something which was examined by Mr. Ralston.

Mr. RALPH. Mr. Poole testified he used a hand rag on all impressions except one. How do you reconcile his statement with yours?

Mr. FERGUSON. Of course it is a difference of memory; but I believe Mr. Poole was so impressed with the fact that we ran that



impression through without polishing it that he had that in his mind when he said there was only one not touched with a rag. That is the only way I can account for his statement.

Mr. RALPH. Were no notes or memoranda made of the facts in connection with this?

Mr. FERGUSON. None at all; nothing except some marks to identify the sheets.

Mr. RALPH. How long did it take to print the 40 impressions?

Mr. FERGUSON. I suppose about 35 or 40 minutes. I suppose we were in the room about that long.

Mr. RALPH. Including the time consumed in the examination?

Mr. FERGUSON. Altogether.

Mr. RALPH. Was all the time consumed in printing?

Mr. FERGUSON. As I said before, there was only one plate, and we had to wait for the press to come around, and then the wiping with the rag, and our examination of the impression took up some time.

Mr. RALPH. Was the test a fair one to the power press?

Mr. FERGUSON. No, sir; I should not say it was.

Mr. RALSTON. That is a conclusion, absolutely.

Mr. RALPH. Mr. Ferguson is testifying.

Mr. RALSTON. I mean it is a conclusion and not a fact.

Mr. RALPH. Was the test a fair one to the power press?

Mr. FERGUSON. I do not think so.

Mr. RALPH. In what way was it unfair to the power press?

Mr. FERGUSON. I think on account of the hurry with which we got out the work it was not fair. You had instructions from the Secretary to get those impressions out promptly, and we practically made the plate and delivered them to the Committee on Printing in two days, and ordinarily a brand-new job being put on a power press, it would not be surprising if we had taken two or three times as long.

Mr. RALPH. Why were only five notes submitted?

Mr. FERGUSON. Because the Secretary directed us to submit five.

Mr. RALPH. Were any other of the 40 impressions suitable to be submitted here?

Mr. FERGUSON. Several more; probably six or seven.

Mr. RALPH. Who selected the five impressions that were submitted to the Committee on Printing?

Mr. FERGUSON. Mr. Rose, the assistant chief of the engraving division.

Mr. RALPH. George U. Rose?

Mr. FERGUSON. Yes; he is an expert.

Mr. RALPH. How did you obtain the five impressions taken from stock?

Mr. FERGUSON. I called on the chief of the examining division, Miss Bealle, to take five sheets at random and send them down.

Mr. RALPH. Did you express to her a desire to have selected sheets?

Mr. FERGUSON. No, sir. I simply said, "Miss Bealle, I want you to bring me five sheets taken at random from the work passed by the examiners as perfect."

Mr. RALPH. Did you ascertain whether or not she did take them at random?

Mr. FERGUSON. No; I relied on her following my instructions. I was not there, and did not want to be there. I wanted her to take them out.

Mr. RALPH. Who printed the impressions taken from stock?

Mr. FERGUSON. I do not know whether I can answer that, because the notes were printed a year ago, but I can recognize some initials, and I verified them. This sheet was printed by Mr. Dennean [indicating].

Mr. RALPH. It has his initials plainly——

Mr. FERGUSON. The others are indistinct.

Mr. RALPH. He is considered a good printer, is he not?

Mr. FERGUSON. Oh, yes; nothing against him. The other initials were indistinct, and it is hard to tell.

Mr. RALPH. Those impressions taken from stock have signatures——

Mr. FERGUSON. Yes, sir.

Mr. RALPH. The other impressions taken from the power press and in the proving room have no signatures?

Mr. FERGUSON. No.

Mr. RALPH. I suggest, Mr. Chairman, that you withdraw those five from your exhibit, as we have exposed them.

Now, they have the signature of the Treasurer and Register of the United States, and a check letter also.

Mr. FERGUSON. Yes.

Mr. RALPH. Have you heard or read the testimony of other men who witnessed the printing of the 40 sheets?

Mr. FERGUSON. Yes, sir.

Mr. RALPH. Do you agree with Mr. Randall or Mr. Poole that the pressure was gradually applied until about the right pressure was obtained?

Mr. FERGUSON. Yes. The sheets will show it.

Mr. RALPH. You did not number those sheets in sequence to identify them—third or fourth, and so on?

Mr. FERGUSON. No.

Mr. RALPH. That was a mistake.

Mr. FERGUSON. Yes.

Mr. RALPH. You agree with Mr. Randell or Mr. Poole that the fountain was adjusted to give less flow of ink?

Mr. FERGUSON. Yes, sir.

Mr. RALPH. After the right pressure was obtained and the flow of ink checked, did you continue to stop the press after each impression?

Mr. FERGUSON. No, sir.

Mr. RALPH. Did you not stop it to examine the impression?

Mr. FERGUSON. No, sir; not after, I should say roughly, 25 or 30 impressions were printed. Then the press was going pretty nicely and it ran right along, except we stopped it to print that one impression that was not polished.

Mr. RALPH. Then, to the best of your recollection, the latter part of the printing, say, to be on the safe side, the last 10 sheets, was practically a straight run of press without stopping?

Mr. FERGUSON. Yes, sir; the last 10 sure, except, as I say, it was stopped when Mr. McKinney asked me about not polishing one impression.

Mr. RALPH. Did Mr. Poole wipe those impressions with a rag?

Mr. FERGUSON. The last 10?

Mr. RALPH. Yes, when you say there was no stoppage?

Mr. FERGUSON. That is correct.

Mr. RALPH. Did he use the rag?

Mr. FERGUSON. Not a hand rag.

Mr. RALPH. Just polished the plates?

Mr. FERGUSON. Yes, sir.

Mr. RALPH. And it then appeared that the press could have continued on indefinitely printing impressions as good as those submitted here?

Mr. FERGUSON. That is the way it appeared to me; the way things were running at that time; yes.

Mr. RALPH. Mr. Foster was perfectly satisfied with the conditions of the test?

Mr. RALSTON. I think that is going a little far; I am not disposed to be very critical. Mr. Foster so expressed himself——

Mr. RALPH. Did Mr. Foster express himself as being satisfied with the test?

Mr. FERGUSON. Mr. Foster admitted it was an unfavorable test for the press, and said that he was surprised at the excellence of the result.

Mr. RALPH. He said that?

Mr. FERGUSON. He said that in your office, and in your presence, and in Mr. McKinney's presence, I think.

Mr. RALPH. He said that in my presence?

Mr. FERGUSON. Yes, sir.

Mr. RALPH. Mr. Ferguson, will you turn over to the committee those impressions you have there and give the attorney for the printers the benefit of your judgment of the impressions there as cut out?

Senator GALLINGER. Are those the additional impressions that were verified and not submitted?

Mr. FERGUSON. These are the remainder of the 40.

Mr. RALPH. There were only six impressions printed in the proving room.

Mr. FERGUSON. Then these others are the five taken from stock. You want to eliminate those altogether?

Mr. RALPH. I do not see any necessity for exhibiting them unless Mr. Ralston wants them. The five that Senator Smoot has ought to be returned.

Senator GALLINGER. In view of the fact that you have testified that one impression made by the power press without any manipulation of the hand wipe whatever is perfect, is it your opinion that you could safely continue to print impressions indefinitely without the hand wipe being used?

Mr. FERGUSON. No, sir; we would not advise that. That impression was taken to show the excellence of the operation of the wiper, but not to show that it was intended to do away with the polisher for printing.

Senator GALLINGER. Do you mean to say it is perfect?

Mr. FERGUSON. No, I did not say it is perfect; but it is a very good one.

Mr. RALSTON. I understood him to say it was entirely satisfactory.

Mr. RALPH. Will you submit what are called hand-roller printed notes?

Mr. FERGUSON. Yes. These were printed on the hand press [indicating].

Mr. RALPH. They are defective notes. Those notes are sealed, and I would not like to leave them here because we have to balance them up.

Senator GALLINGER. In what respect are they defective?

Mr. RALSTON. They are classed as good by your examining bureau.

Mr. RALPH. No, they are not.

Mr. FERGUSON. They were not necessarily passed by the examiners.

Mr. RALSTON. I would like to ask the object of this; whether it be proved that some sheets that ought to be rejected had been done by hand printers?

Mr. FERGUSON. The object is to show what was done on the hand and power presses.

Senator GALLINGER. These are simply a few of many, and you can not make any proper comparison, because you have not many printed by the power press, but only a few.

Mr. RALPH. That is very true; we have had less than 2 per cent.

Senator SMOOT. But the object is to show that these are defective.

Senator GALLINGER. It could not be otherwise.

Senator SMOOT. In the hearing that was held before I noticed that there were less than 2 per cent spoilages on the power press.

Mr. RALPH. Printing the currency, you mean?

Mr. RALPH. I am through with the witness, except that I would like to bring out about the internal-revenue stamps.

You have an exhibit here of internal-revenue stamps printed on hand and power presses. Will you please state to the committee under what arrangements they were printed?

Mr. FERGUSON. Those were obtained, as Mr. Ralph stated, by having the prover in the engraving division print the stamps from the power-press plates on the hand press and then I called on the chief of the examining division, Miss Beale, to give me 20 sheets taken from the regular run of the work from the power presses, from the different jobs, and they were sent down to me from the examining division.

Mr. RALPH. And who marked them for identification?

Mr. FERGUSON. I marked them.

Mr. RALPH. And you forwarded them to Senator Smoot?

Mr. FERGUSON. Yes.

Mr. RALPH. And furnished him with a key?

Mr. FERGUSON. Yes, sir.

Senator SMOOT. In that one note that was run through without either the wiping of the roll or polishing by hand, you say you recognize, of course, that that is not a perfect note?

Mr. FERGUSON. Well, it is a pretty good note.

Senator SMOOT. But not a perfect note?

Mr. FERGUSON. No. It is pretty good.

Senator SMOOT. Therefore you think that the polishing by hand on the power press is necessary, do you not?

Mr. FERGUSON. Oh, yes, sir. I do not know that the wiper would always catch every note so perfectly that it would not be necessary to polish, but the man has got to be there to operate the press.

Senator SMOOT. But the same reason for polishing the plate by hand in the power press applies exactly to the hand press?

Mr. FERGUSON. Yes, sir. The hand polishing to take off any scum or stain that may be left there is necessary.

## Cross-examination:

Mr. RALSTON. This plate that you printed these 40 specimens from was a new plate, was it not?

Mr. FERGUSON. Yes; we had to make it without the signatures, and it was a new plate.

Mr. RALSTON. I will ask you if there is not a very considerable difference between the two ends of the plate as to the amount of ink in there.

Mr. FERGUSON. That would be a better question for one of our experts to answer.

Mr. RALSTON. But you ventured the statement that it is a fair specimen?

Mr. FERGUSON. Yes. There may be—

Mr. RALSTON. Not that there may be, but is there not a very perceptible difference between the two ends of the plate?

Mr. FERGUSON. Well, I should say very slight. That note would pass with any note that you could find in circulation to-day.

Mr. RALSTON. Which end of that plate went through the wiper first?

Mr. FERGUSON. That I can not recall; I do not remember how that was placed on the press.

Mr. RALSTON. You do not know which end?

Mr. FERGUSON. No.

Mr. RALSTON. Is it true that there is a gradual progression, lightness at one end, gradually becoming darker as you approach the other, on that note?

Mr. FERGUSON. That is a mere expression of opinion on my part. I think there is a little difference; it is slight. Not one man in a hundred thousand in ordinary business life would notice it at all. There is nothing there that would promote counterfeiting, surely.

Mr. RALSTON. But this is put in to show the excellence of the work?

Mr. FERGUSON. No; just to show the excellence of the wiper.

Mr. RALSTON. Well, the excellence of the wiper. I would like to have the committee examine this note.

Mr. RALPH. Understand, Mr. Chairman, that no printer wiped or polished that plate.

Senator SMOOT. We understand that; that this is not what the machine is intended to do; this is simply to show what the machine can do with no hand wiping of the roller and no hand polishing of the plate.

Mr. RALSTON. But I think this plate illustrates the viciousness of the machine wiping in itself without going any further. The committee will notice the differences, the lighter color here [indicating] and the darker color here [indicating] and gradually growing darker. It is the lower part as well as the upper, and the scroll work at the top.

Mr. RALPH. I would like to have the committee examine one of the notes polished but not wiped with the rag.

Senator SMOOT. It seems to me that they are both light. I do not see that there is any difference there. Do you call that lighter than this [indicating]?

Mr. RALSTON. Here is the most striking illustration. Take that corner [indicating].

Senator SMOOT. Take both of them this way. That looks lighter if you put it that way, just the same as this looks lighter now [indicating].

Mr. RALSTON. It is a different kind of engraving.

Senator SMOOT. It is not a different kind of engraving at all. With the light this way this is lighter than that [indicating], just the same as this is lighter in the same light [indicating].

Mr. RALSTON. You can not state, Mr. Ferguson, which side went through the press first?

Mr. FERGUSON. No. Mr. Randall can certify as to that.

Mr. RALSTON. I would like to call the attention of the committee to another specimen and ask the witness if there is not a great difference there between the two ends [indicating], and if, again, the right end is not very much lighter than the left-hand end [indicating]?

Mr. FERGUSON. I should say the left-hand end might show slightly more impression on that.

Senator SMOOT. Do they all go in the same way?

Mr. FERGUSON. Yes, sir.

Mr. RALSTON. I will show you another and ask you if there is not the same appearance; the same difference?

Mr. FERGUSON (after examination). I think you are letting your eye deceive you in regard to that right-hand counter. If you draw any distinction at all, I think you might say that the left hand is a little darker.

Senator SMOOT. Is that on account of the shade of the light? Turn it the other way and let the light fall upon the face of the bill and see if it is not the way the light falls upon the bill.

Mr. FERGUSON. I see very little difference, but possibly that engraving may influence Mr. Ralston's mind to make him think it is a little darker.

Mr. RALSTON. I show you another specimen, and ask you if the same is not true about it?

Mr. FERGUSON (after examining). No; I do not think that is noticeable.

Mr. RALSTON. And I show you another one, and ask you if it is not true in regard to this one?

Mr. FERGUSON. Yes; it is true in that one.

Senator SMOOT. And in each one there is more engraving on the left-hand side than on the right-hand side?

Mr. FERGUSON. And a difference of the style of engraving; yes.

Mr. RALSTON. Are not those side pieces identical—these borders [indicating]?

Mr. FERGUSON. Yes; those are practically the same. The large counters are not practically the same.

Mr. RALSTON. And does the difference in lightness show in those borders?

Mr. FERGUSON. In some sheets.

Mr. RALSTON. Does not it show on the sheets I have shown you?

Mr. FERGUSON. I think on one of them.

Mr. RALSTON. Does it not also show on this?

Mr. FERGUSON. We are not taking these sheets in the order the pressure was changed, was reduced.

Mr. RALSTON. We know nothing about that. I am asking you for the results.

Mr. FERGUSON. That should be allowed for. I can see little difference in that sheet [indicating].

Mr. RALSTON. Is it not also true with regard to this sheet [indicating].

Mr. FERGUSON. I can not see any difference there. If there is any choice at all it would be toward the other side on that sheet.

Mr. RALSTON. I show you this and ask you if the left hand corner does not show a mashed appearance, and very black?

Mr. FERGUSON. Yes; there is no question about that.

Mr. RALSTON. And is it not much darker than the right hand side?

Mr. FERGUSON. That may be before we got the press adjusted properly.

Senator SMOOT. That may be an impression made among the very first.

Mr. RALSTON. Do you find any specimens where the right hand corner is mashed and the left hand is not?

Mr. FERGUSON. We can find all degrees in these 40 impressions, from almost a blank sheet, down to practically a perfect impression.

Mr. RALSTON. Will you please show me a perfect impression?

Mr. FERGUSON. Well, Senator Smoot has five we turned in here for comparison. We turned them in, cut right out of those spaces [indicating].

Mr. RALSTON. And those five you turned in were hand wiped, were they not?

Mr. FERGUSON. I do not believe they were; no. I can not swear to that.

Mr. RALSTON. You heard Mr. Poole's testimony, that he hand wiped everyone, except the last?

Mr. FERGUSON. I say he did not do that. I say he hand wiped only about 25 or 30.

Mr. RALSTON. As against his testimony that he hand wiped every one except the last?

Mr. FERGUSON. Yes.

Mr. RALSTON. He also testified that he hand polished every one except the last?

Mr. FERGUSON. I do not think it was the last impression, but he did polish every one except one.

Mr. RALSTON. Now, if Mr. Poole were right about it, and if he hand wiped every single one as stated or in the manner stated, do you think they are proper to be produced as steam-press impressions?

Mr. FERGUSON. Yes, indeed; because they were printed under the ordinary conditions of starting jobs on steam presses.

Mr. RALSTON. Then they were not printed under ordinary steam-press conditions, but under ordinary conditions in starting jobs?

Mr. FERGUSON. Surely; that is as far as we could go—40 impressions—and we were surprised we got so good results in 40 impressions.

Mr. RALSTON. Has any currency been printed on the steam presses for 20 years?

Mr. FERGUSON. Not to my knowledge, except the backs were printed under Mr. Johnson.

Mr. RALSTON. For how long a time?

Mr. FERGUSON. I do not know. I was out of the bureau for four years and that was the time when they were printed, I think. In any event, I was not familiar with the operating part of the bureau at that time.

Mr. RALSTON. What is your function in the bureau?

Mr. FERGUSON. I am the assistant director.

Mr. RALSTON. How long have you been such?

Mr. FERGUSON. Since 1908.

Mr. RALSTON. What were you before then?

Mr. FERGUSON. Purchasing clerk.

Mr. RALSTON. And before then, what?

Mr. FERGUSON. I have been connected with the purchasing department, although not as the man in charge, since about 1881 or 1882.

Mr. RALSTON. You have not had anything to do with the operating part?

Mr. FERGUSON. Very closely in the last three or four years, but prior to that not by my official position; but I had lots of chances for observation through my position as purchasing clerk, because I purchased material for use all over the bureau.

Mr. RALSTON. Did you know anything about the printing by hand of the revenue stamps that have been produced?

Mr. FERGUSON. No; the instructions were given to the engraving division to have those impressions printed.

Mr. RALSTON. You were not present?

Mr. FERGUSON. No; we gave those instructions and knew they would be carried out, and it was not necessary to supervise them personally.

Mr. RALSTON. Do you know anything about whether hand-press or power-press ink was used in printing these faces?

Mr. FERGUSON. I understood from Mr. McKinney that it was hand-press ink.

Mr. RALPH. What is your conclusion now? That the results would have been better if they had used power-press ink?

Mr. RALSTON. If he does not know anything about power-press ink, what is his judgment good for?

Mr. RALPH. You unhesitatingly state that the hand-press ink was adaptable for the work, and I should judge that his competency would be equal to yours.

Mr. RALSTON. I think it is undoubtedly superior to mine.

You have produced some specimens here which were canceled by the bureau. I show you one of them. Was not that thrown out because it was discolored by water falling on it?

Mr. FERGUSON. I presume you are using what the printers call a water break. You refer to that. Well, it is a break; it is broken work; that may have been the cause of it, but it was broken out because it was defective printing.

Mr. RALSTON. It may have been perfect printing, may it not?

Mr. FERGUSON. Oh, no.

Mr. RALSTON. And yet spoiled by water?

Mr. FERGUSON. I hardly think so.

Mr. RALSTON. There was too much water, evidently, on part of the paper, was there not?

Mr. FERGUSON. That might have been, because it came through in the regular printer's work, as a part of his work, and he no doubt had to pay for that sheet.

Mr. RALSTON. And the same is true of this other sample, is it not [indicating]?

Mr. FERGUSON. That is broken work. That was thrown out and charged to the printer as his fault.



Mr. RALSTON. Spoiled in what way; spoiled by water, was it not?

Mr. FERGUSON. I could not say what spoiled it, but it should not be spoiled.

Senator GALLINGER. What do you mean by spoiled by water—imperfect wetting?

Mr. RALSTON. Perhaps too thoroughly saturated with water, or the water went over it after it was printed.

Senator SMOOT. The printer was charged with it, you say Mr. Ferguson?

Mr. FERGUSON. Oh, yes; we do not excuse a printer for that kind of spoiled work.

Mr. RALPH. The girl had something to do with it; she may be responsible for that.

Mr. RALSTON. Here is another one. Was not that spoiled by water [indicating]?

Mr. FERGUSON. They look like water breaks. These three look like water breaks [indicating].

Mr. RALSTON. You would not charge them up against the hand-press system, would you?

Mr. FERGUSON. Not necessarily, except that the printer has control of his work entirely, and he is supposed to correct all defects.

Senator SMOOT. The same thing would apply to the power press, would it not?

Mr. RALSTON. Yes. But this is purely an accident which might happen to anyone under any circumstances; a drop of water is spilled on a sheet and it is spoiled.

Mr. FERGUSON. It might be carelessness on the part of the printer, might it not?

Mr. RALSTON. Yes; but what has that to do with the printing itself? I ask you if the same is not true about the other specimens I show you?

Mr. FERGUSON. I would not like to say what was the cause of all these defects, because we have printers here that can give better testimony than I can give.

Mr. RALSTON. I show you another specimen and ask you if it was not due to water falling over a big part of the plate?

Mr. FERGUSON. I would not attempt to say what caused those breaks; I put them in simply as specimens of broken work, printed by hand.

Mr. RALSTON. I show you another, and ask you if it is not broken in the same way?

Mr. FERGUSON. It is badly broken.

Mr. RALSTON. I show you another and ask you if it is not broken in the same way.

Mr. FERGUSON. It is broken.

Mr. RALSTON. I show you another and ask you if it is not of the same description?

Mr. FERGUSON. They are all badly broken.

Mr. RALSTON. I show you another and ask you if it is not the same?

Mr. FERGUSON. Yes. They are all broken.

Mr. RALSTON. They are all broken, and they are simply broken through water; is not that true?

Mr. FERGUSON. I would not like to say that. I did not see them printed and I do not know what caused that.

Mr. RALSTON. Now, that is something that might happen in steam or hand printing or to the best printer in the bureau?

Mr. FERGUSON. It is chargeable to the printer. It was through his carelessness or oversight in some way.

Mr. RALSTON. Is it not an accident that might happen to the best printer in the bureau?

Mr. FERGUSON. It might happen to the best printer if it was a water break.

Mr. RALSTON. And has nothing to do with the method of the printing?

Mr. FERGUSON. That is possible, if it was a water break.

Mr. RALSTON. Do not the best printers there have such troubles sometimes?

Mr. FERGUSON. Oh, yes.

Mr. RALSTON. Then it has nothing to do with the method of printing?

Mr. FERGUSON. A water break?

Mr. RALSTON. Yes.

Mr. FERGUSON. A water break might happen to anybody.

Mr. RALSTON. Then do you know why those specimens were produced to illustrate hand printing?

Mr. FERGUSON. They were presented to show that hand-press work could be imperfect as well as power press.

Mr. RALSTON. It simply shows that accidents may happen to one class of printers as well as to another class.

Mr. FERGUSON. These notes were taken from the numbering division in two minutes, and if the object of bringing them here had been questioned as to the kind of errors, I could have gotten you thousands of notes with all kinds of errors.

Mr. RALSTON. Those errors are identical in character, are they not?

Mr. FERGUSON. Yes.

Mr. RALSTON. And they are similar to errors made by different plate printers, and with all kinds of work?

Mr. FERGUSON. They are defects of workmanship; yes. I did not attempt to pick them out at all.

Mr. RALSTON. These are accidental?

Mr. FERGUSON. If they are water breaks——

Mr. RALSTON. Have you any doubt that they are water breaks?

Mr. FERGUSON. I would not say positively. I admit that they have a similarity of appearance. They were not selected at all—they were taken at random.

#### TESTIMONY OF CHARLES M. HAHN.

CHARLES M. HAHN, having been duly sworn by Senator Smoot, was examined by the committee and testified as follows:

Direct examination:

Mr. RALSTON. Will you state your occupation?

Mr. HAHN. My occupation now is draftsman; prior to that I was an expert lithographer.

Mr. RALSTON. How long have you been in the lithographing business?

Mr. HAHN. About 22 years.

Mr. RALSTON. Are you acquainted with the different processes of lithography and photography as applied to it?

Mr. HAHN. I am in a general way, practically.

Mr. RALSTON. Did you work as a lithographic engraver?

Mr. HAHN. Yes, sir.

Mr. RALSTON. Where were you employed or engaged in business?

Mr. HAHN. In Washington, with the Bell Lithograph Co., and also with the United States Government.

Mr. RALSTON. Are you acquainted in a general way with the process of plate printing?

Mr. HAHN. Yes, sir.

Mr. RALSTON. I want to exhibit to you some Canadian notes. I show you a \$1 Canadian bill. Upon that there is a protective tint. I ask you if that tint forms any protection against photographic reproduction?

Mr. HAHN. No, sir.

Mr. RALSTON. What is the reason?

Mr. HAHN. Well, the progress of photography is such nowadays that a photographer can eliminate that tint; he can photograph it or leave it off.

Senator SMOOT. It is a protection, is it not, in case the bill is to be changed, in case something is attempted to be erased?

Mr. HAHN. Yes; it would be in that case—in the case of trying to raise the bill.

Mr. RALSTON. Will you look at that carefully and state whether photographically that can be accurately reproduced?

Mr. HAHN. Yes, sir. I would say that it could be reproduced very accurately by photography.

Mr. RALSTON. And may it be accurately reproduced by the lithographic process?

Mr. HAHN. Yes, sir.

Mr. RALSTON. As between, let us say, a United States \$1 bill and that Canadian bill, which is the more easily reproduced, photographically or by lithographic process?

Mr. HAHN. The Canadian note.

Mr. RALSTON. Why?

Mr. HAHN. Because it is more uniform in color and more open in its engraving.

Mr. RALSTON. What benefit do you get from the openness of engraving in reproduction?

Mr. HAHN. It preserves the sharpness and marks the lines true and even, making the print much better. If it were close together these lines [indicating] such as you have here, in photography, they would tend to close up and make the work appear mashed and not clear.

Mr. RALSTON. In the \$1 bill before you it would tend to close up?

Mr. HAHN. Yes; losing the detail of the drawing on the note.

Senator SMOOT. Which would be the easier bill to raise?

Mr. HAHN. Judging from the character of the work—I do not know; you might raise this note other than in this lathe work.

Mr. RALSTON. When you say "this," I wish you would designate which note you mean.

Mr. HAHN. I am referring to the American note. The American note seems to be the more difficult, because the work is closer together

and finer. It requires a great deal more skill to reproduce a fine piece of work than it does a coarse piece of work.

Senator SMOOT. That is due, then, to the engraving and not the presswork.

Mr. HAHN. I should say to both; more especially, perhaps, the engraving.

Mr. RALSTON. Is there any difference between the two as to their having a flat or raised appearance?

Mr. HAHN. Oh, yes. I do not think it requires an expert to pass on that.

Mr. RALSTON. State what the difference is.

Mr. HAHN. This \$1 note of the United States money has more character. It has drawing, it has proportion, that has been closely observed by the artist and engraver in the preparation of this note.

Senator SMOOT. And that would be the same, whether it was printed on a hand or on a power press, would it not?

Mr. HAHN. Well, you would have to give me a note of each one to pass an opinion on that, on a quantity.

Mr. RALSTON. Now, look at the Canadian note. You say that has a flat appearance?

Mr. HAHN. A flat appearance; yes, sir.

Mr. RALSTON. Does that flat appearance facilitate the reproduction?

Mr. HAHN. It does.

Mr. RALSTON. Do you find in the Canadian note the fine lines and tone that are in the United States note?

Mr. HAHN. I do not.

Mr. RALSTON. Do those fine lines and tone offer any obstacle to photographic reproduction?

Mr. HAHN. They do.

Mr. RALSTON. If the fine lines of the United States note were coarsened, were broadened and deepened, what would be the effect so far as reproducing it is concerned?

Mr. HAHN. I do not know that I could clearly answer that. You have treated the lines as being broad, but you have not said anything about the openness of the work. I could not give a practical answer to that question.

Mr. RALSTON. Well, which is the more easily reproduced—the open work or the close, fine work?

Mr. HAHN. The open work.

Mr. RALSTON. Suppose the lines to be deepened, each line carrying more ink, what would you say then of ability to reproduce photographically?

Mr. HAHN. It would make it more difficult to reproduce on account of the shadows from those lines, carrying a volume of ink, destroying the white line or space between, that would show it going together; it would not show the lines as distinct as they should be.

Mr. RALSTON. What would be the effect on the engraving as an engraving?

Mr. HAHN. I should say it would be poor. That is if you are going to adopt coarse lines; if it is going to be a fine line I would say it would be good. You can only have that in steel and not in process work. It is poor for process work, you understand, or anything in

the way of photography. That character of work is very difficult work to reproduce.

Mr. RALSTON. Which character of work?

Mr. HAHN. The close and heavy-line work, the work that carries a volume of ink and the closeness of it.

Mr. RALSTON. Suppose the tendency is to break and lessen the number of lines?

Mr. HAHN. Then it is easier.

Mr. RALSTON. By that you mean a coarser engraving?

Mr. HAHN. Yes, sir.

Mr. RALSTON. What would be the effect of anything which wiped out the effect so far as reproduction was concerned or tended to wipe out the fine lines?

Mr. HAHN. You would gradually lose them.

Mr. RALSTON. Gradually lose the fine lines?

Mr. HAHN. Gradually lose the fine lines, yes.

Mr. RALSTON. Would the loss of the fine lines facilitate reproduction?

Mr. HAHN. No, sir; I do not think it would.

Mr. RALSTON. Take this \$1 note. Suppose the engraving to be the same, but the ink to be wiped out of the lines to a considerable degree. Would that facilitate or otherwise the reproduction?

Mr. HAHN. It would facilitate the reproduction of the notes, because it would do away with those shadows caused by the lines carrying a volume of ink.

Mr. RALSTON. Would it then approximate in appearance the Canadian \$1 bill?

Mr. HAHN. Somewhat, I should judge.

Mr. RALSTON. I mean from a general artistic point?

Mr. HAHN. I would say that it would. It would resemble it more closely than it does now by a good deal.

Mr. RALSTON. Then, I understand, the lightening up that would come from the taking of the ink out of the lines would assist photographic reproduction?

Mr. HAHN. Yes.

Senator SMOOT. Do you not think it would be fairer to compare United States notes printed upon a hand press and a power press rather than to compare United States notes with any other kind of notes?

Mr. HAHN. I can not say that I am enough of a plate printer or know enough of the plate-printing business to say that.

Senator SMOOT. You are an engraver?

Mr. HAHN. I am an engraver on stone; a lithographic engraver; yes.

Senator SMOOT. Have you ever done any engraving upon steel?

Mr. HAHN. No, sir.

Senator SMOOT. So what you say in testimony here—

Mr. HAHN. This is not process work at all.

Senator SMOOT. It has nothing whatever to do with steel engraving?

Mr. HAHN. No, sir.

Senator SMOOT. You never had any experience in that?

Mr. HAHN. No.

Senator SMOOT. So if I handed you these notes here and asked you to tell which were printed on a power press and which on a hand press you would not be able to do it?

Mr. HAHN. No; I could not attempt to do it.

Senator SMOOT. So any comparisons made here between a United States bank note printed on a hand press and a United States bank note printed on a power press, you would not pass any judgment on?

Mr. HAHN. I would not; no.

Senator GALLINGER. Your testimony, as I understood it, related more particularly to the possibility of reproducing a note by photo-engraving?

Mr. HAHN. Yes, sir. Process work, we call it. It covers a whole lot of ground that is too tedious to go into.

Mr. RALSTON. Can you give us any idea of the number of processes that are resorted to in reproducing engravings?

Mr. HAHN. Yes; I guess I could.

Mr. RALSTON. State what they are.

Mr. HAHN. Well, the photo-engraving process on copper and on zinc.

Mr. RALSTON. It is photographed on copper?

Mr. HAHN. Yes.

Mr. RALSTON. And the details——

Mr. HAHN. It is etched then with acids. That is what we term process work, where we depend on chemicals to do the work for us, in a way. Then we have the zinc-plate process by photographing direct on zinc and printing from it.

Mr. RALSTON. Printing from the photograph?

Mr. HAHN. No; it is a photograph really. The plate is sensitized and the print made on the zinc direct, and then the plate prepared and printed on afterwards.

Mr. RALSTON. What is your next method?

Mr. HAHN. The photogravure. That is another process of photographing or reproduction of pictures and things of that kind, a very fine one, too. I am not familiar enough with it. I do not go into any details, just knowing of the process. That is a separate line entirely, a separate business. There may be others. There is the heliogravure. I am not especially versed in those processes to talk intelligently upon them, but judging from the productions they are very fine.

Mr. RALSTON. Do your remarks apply to all those processes of reproduction?

Mr. HAHN. Yes; they are all very good, very fine; very good results have been obtained. You can see them in magazines and leading periodicals, and also in the commercial work of life in the way of calendars and checks and billheads, and stuff of that kind; they all show up very favorably, very good.

Cross-examination:

Mr. RALPH. Are you an expert photographer?

Mr. HAHN. No, sir.

Mr. RALPH. What is your business?

Mr. HAHN. My business has been in lithographic engraving and designing.

Mr. RALPH. And transferring?

Mr. HAHN. No, sir. I have designed for photographers and know what they require to make a successful print. I never made a plate.

Mr. RALPH. But you testified here as to the fact that certain work could be photographed and a process plate made from it? If you have had no experience in photography how can you qualify?

Mr. HAHN. Because I have worked on and retouched negatives. We are closely related and closely allied, it is a closely allied trade. The photographers and the negative cutter and the engravers work hand in hand.

Mr. RALPH. But you do not know anything about photography?

Mr. HAHN. I do not say I am a photographer, but I do know something about it.

Mr. RALPH. What do you know about it; what process would you proceed with if you were going to reproduce that \$1 Canadian note, what screen would you use?

Mr. HAHN. I would not use any screen.

Mr. RALPH. What mechanical process would you actually go through?

Mr. HAHN. I would take that note and put it on the camera board and focus it and then go in the back room and prepare a plate——

Mr. RALPH. Of zinc?

Mr. HAHN. No; glass. This is photographing now; this is not zinc work. We would go and prepare the plate and then go out and put that plate in the camera and make an exposure for two and a half or three minutes, whatever the chemicals are timed to do, and then we would develop the plate and then take it out and strengthen it.

Mr. RALPH. You are speaking about a glass plate?

Mr. HAHN. Yes.

Mr. RALPH. And then what would you do?

Mr. HAHN. Look at it to see if there were any defects, and if there were any defects we would take that negative and retouch it.

Mr. RALPH. What defects would you likely find—a loss of detail in lines?

Mr. HAHN. I do not think we would find many defects. In this note? [Indicating.]

Mr. RALPH. Yes.

Mr. HAHN. I do not think we would find very many defects.

Mr. RALPH. You would lose that, would you not [indicating]?

Mr. HAHN. This Canadian note?

Mr. RALPH. You said that was easier to counterfeit.

Mr. HAHN. We probably would not find any defects.

Mr. RALPH. You would not?

Mr. HAHN. No; not with a good photographer.

Mr. RALPH. Do you consider the lines in there coarser than in the United States note?

Mr. HAHN. I do not consider them coarser, but more open.

Mr. RALPH. That is, the space between the lines?

Mr. HAHN. Yes.

Mr. RALPH. Is that true about vignette work?

Mr. HAHN. Yes.

Mr. RALPH. And about lathe work?

Mr. HAHN. Yes.

Mr. RALPH. Have you reproduced lathe work?

Mr. HAHN. Yes.

Mr. RALPH. Have you had any trouble with it?

Mr. HAHN. No, sir.

Mr. RALPH. What is the most difficult to reproduce, the lathe or portrait work?

Mr. HAHN. I would say the lathe work.

Mr. RALPH. How would you determine the tint; how would you eliminate the tint in the photographic work?

Mr. HAHN. Chemically.

Mr. RALPH. You would not eliminate it in any way on your plate?

Mr. HAHN. No, sir.

Mr. RALPH. Would you not have that interwoven with your black lines?

Mr. HAHN. No, sir.

Mr. RALPH. How would you eliminate it?

Mr. HAHN. Chemically.

Mr. RALPH. Would you do it with colored glass?

Mr. HAHN. No, sir.

Mr. RALPH. Tell us how you would do it chemically.

Mr. HAHN. I could not tell you how chemically, because I would not want to give the secret away.

Mr. RALPH. Oh, you have a secret process?

Mr. HAHN. No, sir; but the photographers do not care about telling that.

Mr. RALPH. It is known universally among the trade?

Mr. HAHN. No; everybody does not have it.

Mr. RALPH. There are five or six thousand photographers in the country?

Mr. HAHN. Yes; they do not care about giving it to outsiders, though.

Senator SMOOT. Are you in the employ of the Government?

Mr. HAHN. I am at the present time; yes, sir.

Senator SMOOT. Have they not got this process down at the Land Office?

Mr. HAHN. No, sir; I am working now on survey work as a draftsman—

Senator SMOOT. I am asking whether this process is not known at the Government Land Office?

Mr. HAHN. No, sir; not to my knowledge.

Senator SMOOT. Have you ever done it yourself—performed this class of work?

Mr. HAHN. I have not counterfeited money; no, sir.

Senator SMOOT. Have you ever performed this class of work of reproducing money by photograph?

Mr. HAHN. No, sir; I never counterfeited anything.

Senator SMOOT. You never photographed anything in your life?

Mr. HAHN. Not any money.

Senator SMOOT. Or anything else?

Mr. HAHN. I never made an exposure. Once or twice—yes, twice in my life—I have done so; and then another man prepared the plate. All I did was to take the cap off the camera and put it on.

Senator SMOOT. A good deal of skill was required in that, was there not?

Mr. HAHN. There was in the preparation of the plate.

Senator SMOOT. Did you ever eliminate an undertone in a photograph?



Mr. HAHN. I never did, but people I have worked with have done so. I have been present and have seen it done.

Senator SMOOT. Do you know how it is done?

Mr. HAHN. Yes; I know how it is done.

Senator SMOOT. You say it is done chemically?

Mr. HAHN. Yes; it is a chemical process. In fact, when you speak of photographing it is nothing but chemicals, with a good, bright mind along with it.

Senator SMOOT. After you had taken that out—that undertone—by your photograph, how did you reproduce it, then?

Mr. HAHN. It had already been reproduced.

Senator SMOOT. No; you say it was taken out?

Mr. HAHN. No; when we put this thing up in front of this Canadian note, or any note in front of the camera, we get everything.

Senator SMOOT. If that is taken before the camera, would it not be all black?

Mr. HAHN. No, sir.

Senator SMOOT. Do you mean every shade would be taken?

Mr. HAHN. Yes. If you were to sit in front of the camera the photographer would get your picture and not mine; you would not get my picture.

Senator SMOOT. And I would not get your color. I was asking about the undertone and the color.

Mr. HAHN. You would get the whole note. That tint is eliminated afterwards.

Senator SMOOT. That is not what I asked you at all. When you take a photograph of that bill do you mean to say that that photograph will show the red and the blue and the tints in it on the photograph?

Mr. HAHN. Yes, sir; but it does not show in colors. They have a process now, I believe, although it has not been perfected—

Senator SMOOT. It does show in color. How does it show?

Mr. HAHN. It shows one uniform thing. The whole object is depicted on the negative.

Senator SMOOT. The bill itself, but not in color?

Mr. HAHN. No, sir; but they do have colored photography now—

Senator SMOOT. It has not been used, has it?

Mr. HAHN. No; not commercially.

Senator SMOOT. Not commercially?

Mr. HAHN. No, sir.

Senator SMOOT. And you would not depend upon it?

Mr. HAHN. No, sir.

Senator SMOOT. If it is to be taken out, then everything is to be taken out, and by chemicals, and for the purpose of reproducing, how would you reproduce it, if you were going to counterfeit; how would you get that color back in there?

Mr. HAHN. By making another plate and preserving the color and eliminating the other.

Senator SMOOT. You say you can not preserve it.

Mr. HAHN. You can photograph it and keep it, or eliminate it, either one you like.

Mr. RALSTON. It would simply be a matter of making two plates?

Mr. HAHN. Yes; making two plates.

Mr. RALSTON. One with colors and one without colors.

Mr. HAHN. Yes.

Senator SMOOT. Could you do it with a blue color?

Mr. HAHN. Yes. Lots of people think that blue will not photograph, but you can do it, and as good as any other color if you know how to do it.

Senator SMOOT. And you have never taken a photograph in your life, and still you know how to do it?

Mr. HAHN. I am not making any pretension of knowing how to do it. I say I have worked so close to them I have a good general knowledge of it, and if I were put to the test I believe I could do it. I have worked retouching negatives and touching them up, so you could not tell they had been tampered with, and I did that for 10 or more years, in the Coast Survey and in other establishments. I have worked close enough to them to talk intelligently upon the subject. That is all the claim I make.

Senator SMOOT. Is that your trade to-day?

Mr. HAHN. I changed my business one year ago. I went from expert lithography to become a typographic draftsman one year ago on the 9th of January, this January past.

Redirect examination:

Mr. RALSTON. Is there anything in that note that you can not reproduce by stone engraving?

Mr. HAHN. A better reproduction could be made by stone engraving than any way I know.

Mr. RALSTON. You are a stone engraver, are you not?

Mr. HAHN. Yes. I would be ashamed of that piece of work.

Mr. RALSTON. When Senator Smoot was out I think maybe I asked you this question: Taking a stone engraving, can you more readily reproduce on stone the Canadian note before you or the \$1 United States note before you?

Mr. HAHN. The Canadian note is the easier subject; it is simpler; stone would hardly carry that detail and it is too close [indicating].

Senator SMOOT. And if a practical engraver had testified before this committee that the engraving on the Canadian note there was just as fine as the engraving on the American note, he was mistaken, was he?

Mr. HAHN. I did not catch that.

Senator SMOOT. If a practical engraver testified before this committee that the engraving upon that Canadian note is just as good and just as fine as the engraving upon the American note, that you have just looked at, he was mistaken, in your judgment, was he?

Mr. HAHN. I may be a little dense on that, I do not quite grasp it. You say the engraving—

Senator SMOOT. I said if a practical engraver, a man that has engraved upon steel for over a quarter of a century, should testify to this committee that the engraving upon the steel plate that that Canadian note was produced from is as fine and perfect as the engraving upon the American note that you were just looking at, then in your judgment he is mistaken, is he?

Mr. HAHN. Yes. This note here is far superior to that note [indicating].

Mr. RALSTON. Please indicate which note you mean, when you say this and that.

Mr. HAHN. The American note is far superior to the Canadian note the engraving and all.

Senator SMOOT. The engraving and everything?

Mr. HAHN. Yes, sir; there is no question about it.

Senator GALLINGER. I think your testimony has reference more particularly to the open appearance of the Canadian note?

Mr. HAHN. Yes, sir.

Senator SMOOT. That Canadian note could be easily counterfeited?

Mr. HAHN. I would say so; yes.

Senator SMOOT. Did you ever hear of one of these Canadian notes being counterfeited?

Mr. HAHN. No. I was never interested in it.

Senator SMOOT. But you would be much surprised, it being so easily counterfeited, to learn that it has never been counterfeited?

Mr. HAHN. Yes, sir; this is the first time I ever saw a Canadian note. That is, I mean recently.

Senator SMOOT. To-day. But you have seen that note before?

Mr. HAHN. No, sir; I never saw that note before.

Mr. RALSTON. You saw that Saturday, did you not?

Mr. HAHN. I do not know whether this was the one or another one. I saw a bunch of them. I do not know that I saw that particular note.

Mr. RALPH. I would like to put Mr. Randall on the stand for a moment.

#### TESTIMONY OF CHARLES H. RANDALL—Recalled.

CHARLES H. RANDALL, being recalled, was examined and testified as follows:

Mr. RALPH. In the printing of the impressions used as an exhibit, how many plates were used?

Mr. RANDALL. One.

Mr. RALPH. Three planks, then, had no plates on them?

Mr. RANDALL. No.

Mr. RALPH. Then, would not the inking roller be taking on ink when the three empty planks were passing under them?

Mr. RANDALL. Yes.

Mr. RALPH. And there would be an accumulation of ink on the rollers?

Mr. RANDALL. Yes.

Mr. RALPH. Would not the roller then transfer more ink to the one plate than desirable?

Mr. RANDALL. Yes.

Mr. RALPH. Mr. Ferguson has testified that only about one-half of the impressions were wiped with the hand rag. What is your impression about that?

Mr. RALSTON. Do you want to contradict what Mr. Randall has testified about this?

Mr. RALPH. I do not know what he has testified about this.

Mr. RANDALL. I was on the other side of the press most of the time, but to the best of my recollection—

Mr. RALPH. Then, you do not want to testify as to how many plates he wiped or how many he did not; is that a fact?

Mr. RANDALL. I am almost positive that he did not wipe them all.

Mr. RALPH. Do you recall, as testified by Mr. Ferguson, that one impression was printed without either wiping or polishing?

Mr. RANDALL. Yes, sir.

Mr. RALPH. Have you read the testimony of Mr. Flaherty?

Mr. RANDALL. Yes, sir.

Mr. RALPH. Recalling the statement that the press used 17 years ago could do equally as good work as now, state what you know of the operations of the old press.

Mr. RANDALL. Seventeen years ago we were compelled to employ laborers to wipe off the plates.

Mr. RALPH. With a rag?

Mr. RANDALL. With a hand rag. The wipers would not take the ink off.

Mr. RALPH. So that the printer had an assistant on the press?

Mr. RANDALL. The printer had an assistant.

Mr. RALPH. Did the printer polish the plate?

Mr. RANDALL. Yes, sir.

Mr. RALPH. This laborer had no experience; he was not a plate printer, was he?

Mr. RANDALL. He had no experience whatever; no, sir.

Mr. RALPH. Mr. Flaherty stated that no better results are obtained from the presses now than at that time. What is your judgment as to that?

Mr. RANDALL. I think the work shows for itself.

Mr. RALPH. What do you mean by that; what is the quality of the work?

Mr. RANDALL. The work is first-class, in my opinion. You could hardly get a good impression in those days.

Cross-examination:

Mr. RALSTON. Will you show from among the 40 specimens produced by Mr. Ferguson after a hand wiping and hand polishing, the steam wiper having first operated, a single first-class impression?

Mr. RANDALL. What was the last part of that question?

Mr. RALSTON. All the specimens before you were hand wiped and polished, were they not?

Mr. RANDALL. Yes.

Mr. RALSTON. After the power press had mechanically wiped, is not that true?

Mr. RANDALL. Yes.

Mr. RALSTON. Now, after that mechanical wiping, followed by a hand wiping and hand polishing, will you show me a single first-class impression?

Mr. RANDALL. Out of these? [Indicating.]

Mr. RALSTON. Among the 40.

Mr. RALPH. There are 11 hand impressions.

Mr. RANDALL. I think you said a first-class impression?

Mr. RALSTON. Yes.

Mr. RANDALL. No, sir.

Mr. RALSTON. You do not find one?

Mr. RANDALL. No, sir; not out of those I have looked at.

Mr. RALSTON. You do not find one first-class impression in the whole 40?

Mr. RANDALL. No, sir.

Mr. RALSTON. Now, Mr. Randall, you spoke of a laborer——

Mr. RALPH. There are only 35 there; you said 40. I think that ought to be corrected.

Mr. RALSTON. Well, say 35. You spoke of a laborer having to wipe off the plate years ago. Is it not true that exactly the same method, or substantially the same method, of wiping was used in the old Milligan presses which were employed on the printing of silver certificates that are used to-day?

Mr. RANDALL. Similar.

Mr. RALSTON. There was no laborer employed then, was there?

Mr. RANDALL. Not that I know of. I worked a Milligan press.

Mr. RALSTON. And that was 23 or 24 years ago?

Mr. RANDALL. Twenty-five years ago, I think.

Mr. RALSTON. And you employed just exactly the same number of people on the press then as now?

Mr. RANDALL. Yes.

Mr. RALSTON. Two girls and a pressman?

Mr. RANDALL. Yes.

Mr. RALPH. Can you pick out one of these 35 notes as good as the average work done by the hand press?

Mr. RANDALL. I think so.

Mr. RALPH. Do it, please.

Mr. RALSTON. By the way, are you an expert?

Mr. RANDALL. No, sir; just an ordinary printer.

Mr. RALSTON. You yourself, however, never were put upon faces?

Mr. RANDALL. Yes, sir; I have worked faces.

Mr. RALSTON. That is, not as a steady job?

Mr. RANDALL. Yes, sir.

Mr. RALSTON. For how long?

Mr. RANDALL. Eight or ten months at a time.

Mr. RALSTON. All right.

Mr. RANDALL. Do you want the records for them?

Mr. RALSTON. No; I will accept your word.

Mr. RANDALL. Somebody gave you some information, I guess, that was not correct; somebody who did not know anything about it.

The witness produced one sheet.

Mr. RALSTON. How many sheets have you put aside?

Mr. RANDALL. I am not through yet. There is a sheet [indicating].

Mr. RALSTON. You produce one sheet which you say is as good as the average in the bureau.

Mr. RANDALL. I have seen impressions out in circulation not as good as that.

Mr. RALSTON. You think, then, that this one sheet is as good as the average in the bureau, one sheet of the 35?

Mr. RANDALL. Because I have seen impressions out in circulation not as good.

Senator GALLINGER. In what respect are those notes not perfect?

Mr. RANDALL. They are not perfect for different reasons. The most of them look as if they had not had the proper pressure.

Senator GALLINGER. Now, if that same job had been started on a hand press with a new plate, do you think there would be as large a

proportion of imperfect notes as seems to have been the case with the power press——

Mr. RALSTON. Thirty-nine out of forty——

Mr. RANDALL. No, sir; you can adjust that press more quickly. They get at it more rapidly.

Senator SMOOT. But if we had continued the running of these——

Mr. RANDALL. Then after we had got them all right we could have run indefinitely.

Mr. RALPH. Suppose you took a back man who had never worked on faces; would the result of his work have been any better than the result you have here?

Mr. RANDALL. I do not think so; no.

Thereupon, at 12.30 p. m., the committee adjourned until Thursday, February 8, 1912, at 7.30 o'clock p. m.

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**WEDNESDAY, FEBRUARY 14, 1912.**

COMMITTEE ON PRINTING,  
UNITED STATES SENATE,  
*Washington, D. C.*

The committee met at 5.10 p. m.

Present: Senators Richardson (chairman), Smoot, Gallinger, Page, Fletcher, and Chilton.

The CHAIRMAN (Senator Richardson). The committee will come to order. Senator Smoot will make a statement on behalf of the committee.

Senator SMOOT. Since the hearing which the committee held on Monday, February 5, 1912, an endeavor has been made on the part of Mr. Ralph, Director of the Bureau of Engraving and Printing, and the representatives of the Plate Printers' Union to come to some understanding or agreement in relation to section 85 of the printing bill (S. 4239), which proposes to change the present law relating to the method of printing bank notes and currency. The committee meeting called for Thursday evening, February 8, 1912, was adjourned until the following Monday, February 12, 1912. Monday evening the full details of the agreement had not been reached, but, I am informed now, after a number of meetings between Mr. Ralph and the representatives of the Plate Printers' Union and their attorney, an agreement has been reached looking toward a compromise of this question, the printing of bonds, notes, and checks on power or hand presses.

I will state that I have, as a member of the committee interested in the printing bill, met with the plate printers' committee and Director Ralph, and, as far as I am personally concerned, I approve the terms of compromise. I believe that this provision can be inserted in an appropriation bill in the House of Representatives and become a law at this session of Congress, thus relieving the situation at the Bureau of Engraving and Printing.

Senator GALLINGER. Let me ask this, Senator: Have you any assurance that it can be placed in an appropriation bill in the House? Being new legislation, it is subject to a point of order.

Senator SMOOT. I do not think that there will be anyone in the House who will make a point of order against the provisions of the

agreement. We do not attempt to change the law itself. It is simply a change in the administration of the law.

Senator GALLINGER. I suppose it could be put on in the Senate.

Senator SMOOT. It could be put on in the Senate, but I have every assurance that the chairman of the Appropriations Committee in the House looks with favor upon this legislation, and also the Democratic members of the committee. I have not heard of anyone in the House who has been approached upon this question but that approves of it.

I believe that it would be best, Mr. Chairman, to have Mr. Ralph make a complete statement of what has been done in the matter, and also as a part of that statement submit the proposition which has been agreed upon.

Before Mr. Ralph does that, however, I would like to have the present hearing made as complete as possible, and I ask that certain letters which were written to the late Senator Allison, chairman of the Committee on Appropriations of the Senate, in 1898, when this question was discussed before, be made a part of this record. That is now about the only thing we have not incorporated into the record. All of the other hearings were placed in the record except these letters, and so, in order to have the record as complete as possible, I would like to have them included. If there is no objection they will be printed in the record.

The letters mentioned by Senator Smoot, and directed to be made a part of the record, are as follows:

TREASURY DEPARTMENT,  
BUREAU OF ENGRAVING AND PRINTING,  
*March 31, 1898.*

SIR: I have the honor to acknowledge receipt of your letter of the 30th instant requesting that I prepare in writing a full statement of the situation relative to the use of steam-power plate-printing presses in this bureau.

As you are aware, owing to the restrictions which Congress placed upon the use of the steam-power plate-printing presses in this bureau for the fiscal year ended June 30, 1890, in the act approved March 2, 1889 (Stat. L., vol. 25, p. 939), making appropriations for the sundry civil expenses of the Government for that year, the use of these presses was discontinued June 30, 1889. An examination of this act and the report of the Senate Committee on Finance, made at the time, will show that the restrictions placed upon the use of these presses were not on account of the inferiority of the work produced by them, nor were they directed to the actual discontinuance of the use of the presses, but were aimed at the royalties paid by the Government for their use.

The prohibition was that unless the patentees would accept royalty at the rate of 1 cent per 1,000 impressions, the presses should not be used by the Government. Had, therefore, the parties who owned the patents existing at that date been willing to accept the royalty specified in the act, the use of the presses would have been continued. These restrictions were held to apply only to the fiscal year for which the appropriation to which they were attached was made. They were not inserted by Judge Richardson in the Supplement to the Revised Statutes, embracing statutes general and permanent in their nature, authorized by Congress. (See Supp. Rev. Stats., vol. 1, p. 698.)

The Senate Finance Committee, which made a thorough investigation of the subject, reported on February 15, 1889 (S. Rept., 50th Cong., 2d sess., No. 2604), and reached the following conclusion. I deem it proper to quote extensively from this report, as it fully covers all the questions involved in this controversy:

"Your committee have fully investigated the acceptability to the general public of the certificates, notes, internal-revenue stamps, postage stamps, and postal notes, in the printing of which steam presses are used. No complaint has been made against internal-revenue stamps, postage stamps, or postal notes thus far. The Postmaster General has cordially approved of this method of printing postage stamps and postal notes. As to the silver certificates, the backs of which are printed by steam presses, the evidence shows that they are circulating not only without complaint from the public, but with the affirmative approval of banks and bankers.

"It has been urged that steam-press prints were the more easily counterfeited. A thorough inspection fails to establish this fact. The records of the Secret Service Division of the Treasury Department certainly disprove it. The concurrent testimony in favor of such prints by the eminent bankers whose letters are incorporated with this report are entitled to the highest consideration upon that point. Steam-press work has certainly been long enough in use and circulation to have aroused complaint of its liability to counterfeiting if any such liability existed.

"A full investigation of the economy effected by the use of the steam press, as compared with the hand press, demonstrates that an equal amount of work can be done by steam presses at from 35 to 65 per cent less cost, doubtless averaging 50 per cent. And it is estimated that the increase in the expenses of the bureau, should the pending bill be adopted, would be nearly \$353,000. From a thorough examination of the subject the committee is satisfied that there is more uniformity in the work of the steam presses than in that of the hand presses; that the average product of the steam press is quite equal to the average of the hand-press work, and that it is produced at one-half the cost of the latter.

"It has been urged that the introduction of steam printing presses has resulted in lower and insufficient compensation to those employed in the printing. The evidence is conclusive that such is not the case. There is no doubt, also, that the adoption of the bill would necessitate a considerable expenditure for more ample accommodations for printing, thus further increasing the cost to the Government.

"Another fact was demonstrated upon examination, that, if the bill should become a law, there are not sufficient number of hand plate printers in the country to supply the Government and also provide for the wants of private parties who are engaged in this branch of business.

"The passage of the bill has not been urged in terms as against the use of labor-saving machinery by the Government. On the contrary, one of the most distinguished gentlemen pressing the bill expressly states:

"It is not opposition to the introduction of labor-saving machinery which prompts the writing of this letter. I am in favor of labor-saving machinery wherever it can do the work as well as by hand. It is my experience that the introduction of a machine gives employment to more workmen, both in the management of the machine and in the construction of them.' (From letter of T. V. Powderly, general master workman, Knights of Labor.)

"The passage of the bill, it is submitted, would be a legislative encroachment upon the executive branch of the Government. Such an attempt on the part of Congress to designate the machines that should be used, the particular workmen who should be employed, and the particular skill they should possess, or the details of methods by which printing should be done, can not, in the judgment of your committee, be defended. It must be assumed that able and expert men will be heads of bureaus, and the department may well be trusted to judge and determine the character of the work necessary to meet the requirements of their departments, respectively, and that they may equally be trusted to protect the interests of the people.

"The committee therefore report back the bill with the recommendation that it do not pass, and submit herewith the testimony taken in connection with the subject."

Upon assuming charge of the bureau I found the facilities that had been introduced to execute the work after the discontinuance of the steam-power plate-printing presses still in operation, and notwithstanding that Congress had provided for an additional wing for the hand-roller presses, at a cost of \$80,000, the space in the building was inadequate to the proper execution of the work and the employees were consequently very much crowded, and it was impossible to increase this force to a sufficient extent to execute the work of the Government within the regular hours.

During the panic of 1893 the plate printers were compelled to work until 6 o'clock each day for a very considerable period. Some method had to be adopted by which the work could be performed, and consequently a considerable quantity of work covering the internal-revenue stamps used on cigarettes was transferred to typographic presses. At that time it was thought the steam-power plate-printing presses could not be used. Subsequently I had occasion to submit a proposition to the Postmaster General for the printing of postage stamps, and at that time, the whole question of the use of such presses having been considered, the proposition submitted for the printing of postage stamps contemplated their execution on steam-power plate-printing presses. The proposition of this bureau was accepted by the Postmaster General, and immediately thereupon 10 of these presses were ordered of a press-building firm, and were, as rapidly as constructed, put in use in printing postage stamps. Subsequently, the demand for postage stamps necessitated an order for 3 additional presses, making in all 13 presses of this class in use in this bureau since 1894 on this work.



The printing produced during these years upon the presses has been entirely satisfactory. In view of the satisfactory results obtained with these presses upon the postage stamps, I deemed it my duty to call the attention of the present Secretary of the Treasury to the fact that a considerable volume of the work on securities, other than postage stamps, could be executed upon such presses with a greater degree of uniformity than on hand presses and at a saving of \$60,000. After consideration of the matter, the Secretary authorized the construction of 12 additional steam-power plate-printing presses for use in printing backs of United States and Treasury notes and silver certificates. These presses are now being placed in position for use in this bureau, and it is to their introduction that the plate printers are objecting. No objection has been made on their part during the past four years to the use of the 13 presses upon postage stamps.

One of the elements under consideration between the Secretary and myself when this matter was first called to his attention was the necessity of placing this bureau upon a basis where the employees would not be required to work beyond the regular hours, that is, from 8 a. m. until 4 p. m. It is impracticable to permit the plate printers to work a continuous eight hours, as that would require the other employees, such as superintendents, helpers, counters, etc., whose services are necessary to enable the printers to obtain their plates, paper, and other material, to render more than eight hours' services, and for all of the time rendered by them beyond eight hours, they claim additional compensation, which the Solicitor of the Treasury has decided they are entitled to and can be paid. The Secretary, as well as myself, desired to stop the payment of this extra compensation, which was a serious drain upon the appropriations made by Congress.

The necessity for the recent discharge of 30 plate printers from the bureau is explained by the fact that the Commissioner of Internal Revenue recently very largely reduced his orders, and as the bureau is dependent upon the orders of the officers having charge of the work for authority to print the securities and stamps, it was necessary to reduce the force. In making the selections for this reduction, the least efficient men were chosen. The orders now in hand will, in my judgment, insure that no further reduction of the force of plate printers will be made. This statement, of course, is made in view of the orders now in hand and the estimates of the various officers having charge of the service for the coming fiscal year. It will depend, however, largely upon the actual necessities of the service.

The adoption of the amendment suggested would not only prevent the placing of this bureau upon the efficient footing desired and require the continued payment of \$120,000 a year for the performance of this work which could otherwise be done for \$60,000, but it would also necessitate the execution of postage stamps on hand-roller presses. As the printing by hand of the immense number of these stamps required would be utterly impracticable, it would be impossible for this bureau or any other establishment to supply the postage stamps needed. Another serious objection to the adoption of such restrictive legislation is the fact that in the event of any great and unusual demand for notes or bonds, requiring prompt and immediate delivery, this bureau would be restricted to the use of hand presses. During the last administration, when bonds were issued, we were required to make prompt delivery of them, and it was found necessary to use typographic presses for parts of printings thereon. Had any restriction been placed upon the use of steam presses it would have seriously interfered with the execution of this work. The present would appear to be a very bad time to adopt any such restrictions.

In conclusion I beg to say that I look upon this question simply as a matter of public business, in which I feel that I, as a public officer, should make such recommendation as will insure the execution of the work under my care in the most perfect, expeditious manner, and I believe that by the use of improved machinery that this can be done in the printing of the backs of notes and certificates of the Government. I beg to send herewith copy of a memorandum on this subject submitted by me to the Secretary of the Treasury.

Respectfully, yours,

CLAUDE M. JOHNSON,  
Director.

Hon. WILLIAM B. ALLISON,  
Chairman Committee on Appropriations,  
United States Senate, Washington, D. C.

TREASURY DEPARTMENT,  
BUREAU OF ENGRAVING AND PRINTING,  
*April 2, 1898.*

SIR: In answer to your verbal inquiries relative to the use of steam plate-printing presses in this bureau, I have the honor to say that hand-roller plate-printing presses cost \$156.75 each. A stock of these presses is retained on hand constantly over the number in use, to take the place of worn-out and discarded presses.

As to the comparative quality of printing the backs of bank notes upon hand-roller presses and steam plate-printing presses, I beg to say that this is a matter which was very thoroughly considered before action was taken by the Secretary of the Treasury and myself, and that no one could possibly be more interested or careful in the consideration of this question than the Secretary of the Treasury.

The claim made by plate printers that increased danger from counterfeiting will result from the use of steam presses for the printing of the backs of bank notes is raised by them simply by way of argument, without any substantial ground whatever to stand upon. Surely the Secretary of the Treasury and the director of this bureau, being directly responsible, are the officers of the Government who feel the deepest concern upon this point, and would naturally exercise the greatest care.

I am also informed that it is further claimed that a great many plate printers are out of employment. I beg to say that this is not the case. I will venture the assertion that there are not to-day 10 unoccupied first-class plate printers whose services could be procured for work in this bureau in the event of any considerable increased demand for its product. There are possibly 40 or 50 printers unoccupied. Of that number but very few are good workmen.

As to space for additional hand presses, I desire to say that this office has recommended year after year during my administration, as well as that of my predecessor, and even prior to his incumbency, an appropriation for additional buildings in which to place our ink mill, rag laundry, storeroom, etc., with the expectation that the main building would be relieved, so that more space might be made in that way, but without avail. In rearranging the presses recently, on the completion of the center wing of the building, every foot of space available for presses was occupied; and then, considering the orders for plate-printed work, we did not have sufficient hand presses in position to meet any excessive demand upon this bureau.

I stated to you orally that no discharge whatever is contemplated on account of the use of these steam presses, and should the orders for work continue to increase as they have in the past, I have no doubt but that the roll of plate printers can be maintained as at present.

I desire to call your attention to the fact that the deliveries made by this bureau during the month just past were over 9,000,000 sheets, that being the largest aggregate deliveries of finished work ever made in one month by this bureau, and larger than the estimated monthly average for the year, which has never before occurred. This fact must impress your mind with the absolute necessity of increasing the physical force of this bureau.

Respectfully, yours,

CLAUDE M. JOHNSON,  
*Director.*

HON. WILLIAM B. ALLISON,  
*Chairman Committee on Appropriations, United States Senate,  
Washington, D. C.*

MEMORANDUM RELATIVE TO THE USE OF STEAM PRESSES IN PRINTING THE BACKS OF  
BANK NOTES.

The question of the use of improved machinery in the manufacture of all articles to which it can be adapted by private corporations is one that has been settled by actual experience. No corporation doing business for profit fails to take advantage of the use of machinery in place of hand labor wherever it is possible to derive a benefit thereby and to give a like benefit to the consumers of its products. The cost of all the necessaries and luxuries of life has been decreased by the use of improved machinery in the past, and unquestionably the cost of manufactured articles of all kinds will continue to decrease until machinery becomes absolutely perfect.

It is not the policy of any private corporation to continue to employ labor when the same result may be obtained by the use of machinery. It seems to me, therefore, it is the duty of the public official representing the taxpayers of the country, in the expenditure of money collected for the purpose of maintaining the Government, to conduct the business of the branch over which he presides by the same methods he would if

employed by a private corporation. Therefore, in the direction of the business of the bureau, I have conceived it to be my duty to suggest to the Secretary of the Treasury the introduction of steam-power presses for the purpose of printing the backs of bank notes, because—

First. By their use \$60,000 per annum of the public money can be saved.

Second. The physical force of this bureau is becoming inadequate to meet the requirements of the Government.

Third. The available space in the building is also becoming inadequate to meet the gradual increase of the work.

Although Congress in 1890 appropriated \$80,000 for an extension of the building by the construction of a wing on the west, and in 1894 and 1895 appropriated \$50,000 for an extension by adding three stories to the center wing, yet the bureau is now crowded in certain branches of its work, particularly in the plate-printing pressrooms. The crowded condition of the main pressroom on the third floor is a matter of comment by all visitors to the establishment.

Fourth. It has been demonstrated by actual experience in this bureau that backs of bank notes can be printed upon steam-power presses more uniformly and as perfectly in every other respect as they are now printed by hand presses.

There are not enough first-class plate printers available to-day to do the work of the Government in cases of great emergency, except by working overtime. It would appear, therefore, to be good policy to increase the ability of this bureau to perform its work under any emergency that might arise. I am of opinion that every first-class plate printer who is a reliable workman can be given employment, and any reduction which may follow the purchase of additional power presses will be made in dropping men who are now employed because it is necessary to retain unreliable printers.

We now have over 300 plate printers upon our rolls. Out of that number there are at least 50 men who can not, or do not, do good work, who will remain absent without leave, thus causing the bureau the loss of the product of their presses, and who each pay day, if they report for duty, show evidences of excessive drinking and nervousness that virtually incapacitates them for good work.

The purchase of these presses will place the bureau in a position to be independent of men of this character. It will also enable the bureau to accumulate a stock of finished work, thus making deliveries of seasoned in place of green printing, which never lasts as well as when it is seasoned. This it has never been able to do because of its want of printing capacity, and should the policy be adopted which, in my opinion, is inevitable, of renewing the currency of the country very much more rapidly than it has been in the past, without these presses this bureau would not be able to meet the demands made upon it by the Treasurer of the United States. I consider the frequent renewal of the currency one of the greatest safeguards against successful counterfeiting, and a policy will probably be adopted within the near future of keeping a stock of notes at the various subtreasuries, so that the banks can be supplied with new in place of old, worn-out notes, thus saving the cost of transportation and loss of interest by reason of time consumed in transit.

As before stated, in the event of a policy of this kind, these presses would be absolutely essential. It is not intended to discharge at once any great number of printers. In fact, the natural increase of the business of the country will continue to keep employed about the number of printers that we now have on our rolls, regardless of the use of steam presses. The poor element will be culled out gradually, but all of the worthy men will be kept employed. It has been my policy not to appoint additional apprentices, who overcrowd the printing trade. In fact, there has not been an apprentice appointed for about 15 months, and during the time that I have been director of the bureau there have been more printers employed than ever before in its history, and I believe that this condition will continue, regardless of the use of steam presses for printing the backs of bank notes.

Congress makes appropriations for the purpose of producing Government securities, expecting of the executive officers that they will be executed at the lowest possible cost, attaining at the same time the highest quality of work. It seems to me, therefore, that if the executive officers fail to utilize machinery that will reduce the cost of the work materially, as in this case for the purpose of continuing men at work, that they are without warrant of law, and upon pure executive authority undertaking to give a gratuity to a class of people who have rendered no service that entitles them to such. Under the conditions above stated, I do not believe that any labor organizations can justify a movement to prevent the officers of the Treasury Department from using improved machinery in the production of material which it alone can furnish.

CLAUDE M. JOHNSON,  
*Director of Bureau.*

**STATEMENT OF MR. JOSEPH E. RALPH, DIRECTOR OF THE  
BUREAU OF ENGRAVING AND PRINTING.**

Mr. RALPH. Mr. Chairman and members of the Senate Committee on Printing, I wish to have it appear on the record of the hearings of this committee that the last scheduled meeting of this committee was postponed at my request in order that I might continue the negotiations I was then engaged in with the executive committee of the International Steel and Copper Plate Printers' Union toward a compromise settlement of the question of the repeal of the statutory provision which prohibits the printing of our bonds, notes, and checks on other than hand-roller presses, as provided for in the Smoot bill (S. 4239) to codify the laws relating to printing. In connection with the negotiations referred to I wish to report that after extended conferences with the representatives of the Plate Printers' Union we have reached a satisfactory conclusion, and it is my pleasure to offer as a substitute for the section of the Smoot bill referring to this question the following form of legislation for consideration in connection with the sundry civil appropriation bill:

*Provided further*, That hereafter the proviso of the act of July 1, 1898 (30 Stat. L., 604), directing that all bonds, notes, and checks shall be printed on hand-roller presses shall not apply to checks, the backs and tints of all United States bonds, the backs and tints of all United States paper money, and the backs and tints of bonds and paper money issued by any of the insular possessions of the United States, any or all of which shall be printed from intaglio plates and on such plate-printing presses as may be directed by the Secretary of the Treasury, said presses to be operated by plate printers, except that checks and tints may be printed by any desired process; and

*Provided further*, That the backs of all United States paper money shall be printed from four-subject plates, and the faces of all internal-revenue stamps now printed from intaglio plates on hand-roller or power plate-printing presses shall continue to be printed from intaglio plates on hand-roller or power plate-printing presses, as the Secretary of the Treasury may determine, said presses to be operated by plate printers; and

*Provided further*, That should the Secretary of the Treasury decide to print on the aforesaid power plate-printing presses any of the classes of work hereinbefore permitted to be printed on such presses, not more than one-fifth of the total number of hand-roller presses required to produce the estimated quantity of such work in any fiscal year shall be displaced in such fiscal year; and

*Provided further*, That the Secretary of the Treasury may, in his discretion, apply motors to hand-roller presses that are now, or may hereafter be, operated in the Bureau of Engraving and Printing, but such presses, if equipped with motors, shall be regarded as hand-roller presses within the meaning of this act.

In connection with this agreement I will state that the representatives of the plate printers' union and myself will use every effort to have this measure incorporated in the sundry civil appropriation bill which will shortly be considered by the Committee on Appropriations of the House of Representatives.

Mr. Fitzgerald, chairman of that committee, is out of the city, but on his return to-morrow the executive committee of the plate printers' union and myself will take the matter up with him.

In conclusion, I wish to state that this agreement with the plate printers is entirely satisfactory to myself and will result in economies of \$140,000 for the first year, and by the expiration of five years it will result in an annual economy of approximately \$600,000. In addition to the economies effected it will greatly facilitate the Bureau of Engraving and Printing in the execution of the work demanded by the Treasurer of the United States, and I wish to incorporate in the hearing the following letter received from the Treasurer of the

United States in connection with the urgent necessity of increasing the deliveries of the Bureau of Engraving and Printing.

Senator SMOOT. Mr. Ralph, has Mr. Ralston seen that letter?

Mr. RALSTON. I do not think I have.

Mr. RALPH. I will show it to him now.

The letter is as follows:

TREASURY DEPARTMENT,  
OFFICE OF TREASURER OF THE UNITED STATES,  
*Washington, February 7, 1912.*

MY DEAR MR. RALPH: In regard to our requirements based on public demands for new paper currency I wish to say that the percentage of increase year by year seems to be growing. I submit the following figures as bearing on the situation:

*United States paper currency issued.*

Fiscal year.	Number of notes and certificates.	Total value.
1902.....	116,697,874	\$466,908,000
1903.....	141,235,371	551,038,000
1904.....	152,908,853	650,026,000
1905.....	169,259,812	637,540,000
1906.....	172,930,548	629,526,000
1907.....	173,083,911	698,273,000
1908.....	188,999,912	804,326,000
1909.....	202,746,192	764,510,000
1910.....	240,990,922	767,115,600
1911.....	267,207,921	913,540,000

The total number of pieces of United States paper currency redeemed during the fiscal year 1911 was 251,189,762, an increase of 35,016,489, or 16.2 per cent over those of the preceding year. The pieces redeemed were 10,198,840 greater than those issued in 1910. The average life of paper currency is shortened by the increasing activities of such money in the business transactions of the country. This is especially true of the smaller denominations of silver certificates, ones, twos, and fives. Among the reasons attributable to this condition may be cited the following:

The growth in the country's population, which has necessarily caused the money, and especially the smaller denominations, to circulate more rapidly, with corresponding wear.

The growth in business activities.

The tendency toward the use of small denominations.

The publicity given to uncleanness and insanitation of soiled notes and the consequent demand for cleaner money.

The necessity for maintaining in good condition an increasing volume of outstanding pieces.

The growing practice of payment of wages in factories, shops, etc., weekly and biweekly, as compared with monthly.

The growing popularity of paper money in sections where silver was formerly in the greatest demand.

For the present fiscal year estimates were submitted a year ago on the basis of 60,000,000 sheets. Even at that time it was not thought that this amount would be sufficient to meet requirements, but in view of the probability of your being able to turn out an amount actually in excess of this figure and in view of the desire of the department to limit expenses as far as possible, the estimate for 60,000,000 sheets was sent in.

Experience last fall demonstrated our inability to get along until June 30, 1912, on the basis submitted, so recommendation was made to the Secretary of the Treasury that a request upon Congress should be made in the urgent deficiency bill for an additional 10,000,000 sheets. This request was made and Congress granted it.

With respect to the fiscal year 1913, last fall an estimate was submitted for 90,000,000 sheets. This was later reduced to 80,000,000 sheets in view of the securing by us of a deficiency of 10,000,000 sheets in the current fiscal year. At the same time it was thought by us that 90,000,000 sheets for 1913 would be no more than enough to meet the public's requirements and possibly permit the building up of a modest reserve in

the Treasurer's office. It really becomes embarrassing to us frequently because of our inability to meet the demands of the public as represented by requisitions from the banks. We simply do the best we can and lead what might be termed a hand-to-mouth existence, always hoping that conditions later on will permit us to more nearly give the people what they require. If we really should adopt a policy of supplying the public with just what they want and ask for I hardly know where to place a limit upon the number of sheets of paper money that we will need.

Furthermore, I personally and officially feel favorably disposed toward improving the standard of condition of paper currency in circulation. In most sections of the country, principally in the South and Middle West, the paper money that one sees in circulation is in very poor condition, and yet banks are deterred in getting hold of this money and sending it in for redemption by reason of the expense of transportation both ways; that is, to Washington on the redemption money and from Washington on the new money; and, further, because of the fact that the bank is deprived of the use of this money pending the period of redemption. I am not sure but that the Government should share with the public the expense of redemption of money in order to raise the standard of condition of the paper currency in circulation. If this should be done and the condition of paper money throughout the country were raised to even the standard, say, now recognized in the city of Boston, I feel sure that our requirements for new paper currency would in time be double what they are now.

This entire matter is one that interests me very much, and as Treasurer of the United States I feel that there is a duty for us to perform in endeavoring to meet the public's requirements as far as we can consistently with our duties as efficient and economical administrators.

Very truly, yours,

LEE MCCLUNG,  
*Treasurer of the United States.*

Hon. J. E. RALPH,  
*Director of the Bureau of Engraving and Printing,  
Washington, D. C.*

Mr. RALPH. In justice to the American Bank Note Co., which might be said to be, in a sense, the mother of our Great Bureau of Engraving and Printing, and which is an American institution doing business in this country and Canada, I offer a telegram from Mr. Warren L. Green, president of this company:

NEW YORK, February 2, 1912.

J. E. RALPH,  
*Director Bureau Engraving and Printing,  
Washington, D. C.:*

Referring to our conversation, we consider that notes printed with an underlying tint, especially if that tint be of brown, while not as brilliant in appearance as those printed without a tint, such as the United States notes, are much more difficult to counterfeit. The blue black we consider preferable to the brown black from the point of view of security. Security should never be lost sight of. It should come first, and then as much artistic merit as is possible without injury to the scientific value of the note. To the best of our knowledge and belief there has not been a single successful counterfeit of the Canadian note since we have been printing it.

W. L. GREEN,  
*President American Bank Note Co.*

In concluding my remarks, I wish to state that the honorable Secretary of the Treasury is absent from the city and will not return until the latter part of the week, and I wish it distinctly understood that the Secretary has not had an opportunity to fully consider the details of this compromise, and I do not know whether he will approve or disapprove of the action being taken. I regret that the Secretary's absence from the city prevented his consideration of this matter.

I hope that the representatives of organized labor who are parties to this agreement will have it appear on the records of the hearings of this committee that they are perfectly satisfied with the results, and that they shall make the same known to organized labor throughout the land who have taken an active part in this campaign.

I also wish to thank the members of this committee for the interest they have taken in the hearings and the fair and impartial manner in which the hearings have been conducted.

**STATEMENT OF MR. JACKSON H. RALSTON, ATTORNEY FOR THE  
INTERNATIONAL STEEL AND COPPER PLATE PRINTERS' UNION  
OF NORTH AMERICA, LOCAL NO. 2.**

Senator SMOOT. Mr. Chairman, I would like to have Mr. Ralston make whatever statement he desires at this time.

Mr. RALSTON. Mr. Chairman and gentlemen of the committee, on behalf of the plate printers interested in this matter, I want at this moment to thank the committee for the courtesy and good faith with which it has entered into the examination of this very vexed question. I want to say that my clients appreciate very thoroughly your systematic and industrious attention to it.

My clients have had to look at this proposition from several points of view. They are representatives here of what they consider, and what I think we must all agree, is a noble art. It is more than a trade; it is an art, and they have taken a pride and do take a pride in its maintenance at the very highest point of excellence.

Furthermore, they have had to consider it, and they do now consider it, of course, from the standpoint of their own immediate personal interests, and from that of the immediate personal interests of some eight or nine hundred of their fellow workmen in the Bureau of Engraving and Printing. You gentlemen have recognized the interest which they had for that reason, and they have been very frank in stating it to you. They have also felt—and I am sure you will pardon me for this few minutes of preamble—that they could not overlook, and I am sure we will all agree in the end that they have not overlooked, their interests as American citizens in bringing about or in helping to bring about such a result as would tend in the highest possible degree to the furtherance of the general public welfare in which we are all concerned as American citizens, whether plate printers or not. They have borne all of these considerations in mind, if you please, in joining with Mr. Ralph in trying to bring about the agreement which is now being presented to the committee for its consideration and for its ratification.

Many of the suggestions—several at least of the suggestions—which are contained in this agreement have been made by the committee or on its behalf, and they have related to matters with which, I think Mr. Ralph will agree with me, the plate-printers' committee, purely as a committee, if it were standing at arm's length from him, would have had no possible concern; but they related to matters which, in the interest of as perfect legislation as might be accomplished, they felt it was their duty to call to the attention of this committee and to Mr. Ralph.

Now, with this preamble, I want to say on behalf of the plate printers that, save for a single thing, which can surely very easily be modified, the agreement, save perhaps for a purely verbal criticism which has been presented by Mr. Ralph, is entirely satisfactory to them. Speaking of the verbal criticism, and I think Mr. Ralph agrees to it, which I would make, I would say the imperative por-

tion of the law is contained, or at least it is referred to, in the first three lines of the proviso submitted. That is—

that all bonds, notes, and checks shall be printed on hand-roller presses.

Perhaps I am wrong in my construction of the English language, but I submit it to the committee that that is more in the nature of a permission, as it would seem to me. With this idea in mind, I think that the word "authorized" in the third line of the third proviso should be changed to "permitted." It should be "permitted" rather than "authorized."

Mr. RALPH. I corrected that.

Senator CHILTON. You read it "permitted," and I was going to ask you why the change was made.

Mr. RALSTON. It seems to be the result of my criticism. It seemed to me it should be permissive rather than directory. The language of the act is that these things be printed on hand-roller presses. The permission is that certain of them may be printed on power presses. I do not think it is of very great importance; so that we need not discuss it further.

The other matter, which is more a matter of substance, and which I am sure was Mr. Ralph's design and was the design of the committee, relates to the question of certificates. I call the committee's attention to the fact that there was a ruling of the Comptroller of the Treasury not long ago relating to the Philippine currency, in which he undertook to make a definition which, I may be permitted to say, I do not think was sound in law; but it was made by him, and that is that the word "notes" included in the act which is now designed to be amended did not include certificates. Perhaps the ruling was not called for. As I remember, it was not called for by the matter he was requested to decide upon. In other words, as we lawyers would say, it was probably obiter dicta; but at any rate it stands there and might be a source of some vexation in the future. I am assuming, therefore, that it is the design of Mr. Ralph—he said so to me personally, and therefore it is stronger than an assumption—and I will assume that it is the desire of the committee that when the word "notes" is used it shall be used in the most comprehensive sense. That has been the practical application of the word in the bureau, and I believe it was the intention of Congress beyond all question of doubt. There are other provisions in this proposed clause which would appear to indicate that that is the present intention of this amendment; but I think perhaps on this point the amendment should be made a trifle more specific.

With that only criticism, I believe, of substance, the plate printers' committee authorizes me to say that this proposed amendment to an appropriation bill meets with their approval, in the first place, as protecting the integrity of the trade—of the art—to which they are devoted; second, as amply providing protection to their members against loss of employment here, which would be a very serious thing to them indeed; and, in the third place, as meeting all the requirements of the public interest.

Senator FLETCHER. Where would you suggest the insertion of the word "certificates"? Would you say "all bonds, notes, certificates, and checks"?



Mr. RALSTON. We can not put it in at that point without explanation, because the language would not be satisfactory there. You might state in parentheses that it shall be considered as including certificates used as money. I think that would meet the requirements of the situation.

Senator SMOOT. Mr. Ralston, I have always tried, as you know, and I believe as the men know now, to meet every question in just as favorable a light as possible and see if we could not agree upon every question involved; but I hardly think that we could agree to put "certificates" in the agreement, because I suppose the only certificates that would be printed would be those for the Philippine Islands.

Mr. RALSTON. I am speaking of gold and silver certificates. They are being printed to-day on the hand presses.

Senator FLETCHER. Do not the words "United States paper money" cover that?

Mr. RALSTON. I think perhaps they do, excepting that I do not know that the words "paper money" have received a very exact definition.

Senator SMOOT. We have a decision from the Treasury Department, brought about by a letter from Brig. Gen. C. R. Edwards, United States Army, Chief of the Bureau of Insular Affairs. Have you seen that decision?

Mr. RALSTON. I think it is that decision that troubles me.

Mr. RALPH. I think that is what Mr. Ralston has in mind. I have all of the decisions from the comptroller with me here.

Senator SMOOT. I think it would be a good idea to put all of this into the record now, so that the committee or Congress can see just what that decision was.

Mr. RALSTON. If Congress explains away the decision, my point would be explained away; otherwise it would be emphasized.

Senator CHILTON. You are referring to the word "notes" in the second line, "that all bonds, notes, and checks," etc. The question is, whether or not the word "notes" would include silver certificates and gold certificates.

Mr. RALSTON. Yes; gold or silver certificates.

Senator CHILTON. Whether or not they would be considered as notes.

Mr. RALSTON. That has been the practical interpretation—I think Mr. Ralph will agree with me on that point—up to this time, in applying the law, that the word "notes" included certificates.

Senator SMOOT. If we put the word "certificates" in, it would have the effect of changing the original act. All we are trying to do is to amend the law and to include no subject matter outside of the original act. Now, if we put in the word "certificates," then any Member of the House could make an objection, and it would go out on a point of order.

Senator GALLINGER. The whole thing would go out if a point of order was made. It is new legislation in an appropriation bill.

Mr. RALSTON. May I suggest that I read in the paper the other day that the old Holman rule had been revived. What effect would that have upon the matter? That amendment would be in the interest of economy.

Senator FLETCHER. In line 5, after the word "money," why not include "gold and silver certificates"?

Mr. RALSTON. That refers merely to the printing of the backs.

Senator FLETCHER. That would not only apply to backs but notes of all kinds. "United States paper money" would include gold and silver certificates, in my judgment.

Mr. RALSTON. You could say there "It shall include gold and silver certificates." I think that perhaps would have a strengthening effect.

Senator CHILTON. Could anything be stronger than this language—"All bonds, notes, checks, and paper money of the United States"?

Mr. RALSTON. I must confess to a little uncertainty about the meaning of the words "paper money." We know what you mean in ordinary parlance by that, but silver certificates are not legal tender, and whether paper money means legal tender or not I confess I would not like to say.

Senator GALLINGER. What is the purport of the comptroller's decision?

Senator SMOOT. Here is the correspondence I have in relation to the matter. I suppose it will be the same as the decision you refer to. This is a letter from R. J. Tracewell, the comptroller, to the Secretary of the Treasury, dated August 31, 1911. The clerk will read it.

The letter is as follows:

TREASURY DEPARTMENT,  
OFFICE OF COMPTROLLER OF THE TREASURY,  
*Washington, August 31, 1911.*

The SECRETARY OF THE TREASURY.

SIR: By your reference of August 29, 1911, I am requested to decide a question presented by the Director of the Bureau of Engraving and Printing, as follows:

"I am in receipt of a letter from the Chief of the Bureau of Insular Affairs, War Department, dated August 25, 1911, as follows:

"In preparing estimates for the silver certificates and other work required to be furnished by the Bureau of Engraving and Printing for the Philippine Islands during the fiscal year 1913, it has been suggested that some economy might be effected by having the silver certificates printed by a more modern method than on the hand presses hitherto used in the Bureau of Engraving and Printing in their preparation, and I therefore have the honor to request you to advise me whether it would be practicable to print these certificates on the power presses used in that bureau, and if so, what the approximate saving would be."

"In connection with this request I beg to call your attention to the fact that by the act of July 1, 1898 (30 Stat. L., 605), there is a proviso 'that hereafter all bonds, notes, and checks shall be printed from hand-roller presses,' but inasmuch as Congress makes no appropriation for the printing of the silver certificates for the Philippine Islands, this bureau being reimbursed by the Government of the Philippine Islands for all work executed for it, and as the Bureau of Insular Affairs could, if it so desired, have the work now executed at this bureau done by any private establishment which would not be governed by the proviso above quoted, I am of the opinion that the proviso refers only to the notes issued by the United States proper, and that it does not apply to the Philippine silver certificates. I would be glad to have this opinion confirmed, and therefore have the honor to request that the Comptroller of the Treasury be asked to give an opinion as to whether or not the act covers the Philippine silver certificates."

The act of July 1, 1898 (30 Stat., 605), making appropriation for sundry civil expenses of the Government, under the head "Engraving and printing," provides:

"That hereafter all bonds, notes, and checks shall be printed from hand-roller presses."

The act of March 2, 1903 (32 Stat., 954), to establish a coinage system in the Philippine Islands, provides:

"SEC. 12. That the Secretary of the Treasury is hereby authorized and directed, when requested by the Government of the Philippine Islands, to cause to be made and prepared any drawings, designs, and plates, and execute any coinage, engraving,

or printing of notes and certificates authorized by this act, and to make a proper charge for the same, covering as nearly as may be the actual cost, which shall be defrayed from the revenues of said islands."

The act of July 1, 1898, *supra*, is a restrictive act and consequently should not be enlarged by construction so as to embrace objects or classes of printing not mentioned therein. Congress in the act set out the class of printing, *eo nomine*, which should be accomplished on hand-roller presses. Certificates are not mentioned, and hence the director under his general authority is not confined to hand-roller presses for the printing of certificates.

Entertaining the above view, it is unnecessary for me to determine whether printing for the Philippine Islands comes within the purview of said act of July 1, 1898.

Yours, respectfully,

D. I. TRACEWELL, *Comptroller*.

Senator GALLINGER. It strikes me as being absurd to say that if the law relates to bank notes it does not relate to certificates of silver and gold deposits in the Treasury. They are money.

Senator SMOOT. Mr. Chairman, I want to say this, that it is my intention, and I believe the only construction that can be put upon the meaning of this agreement, that it means all United States paper money and that silver certificates are United States paper money.

Senator GALLINGER. I do not think there can be any question about it.

Senator SMOOT. Gold certificates are United States paper money, and I have no doubt at all but that that view would be taken in any decision by any court.

Senator CHILTON. It is a note, too. A silver certificate, for instance, says:

This certifies that there have been deposited in the Treasury of the United States — silver dollars, payable to the bearer on demand.

That is equivalent to a promise to pay.

Senator SMOOT. I feel that the men are perfectly safe in accepting the broad wording of this agreement and that it would be unwise to include words which would raise a question on the floor.

Mr. RALSTON. Mr. Chairman, I want, as far as I am concerned, to facilitate the work of the committee and to facilitate the settlement of this question. I have felt it my duty to my clients to bring this matter before the committee in order that, at any rate, there might be such an expression of opinion as would serve as an absolute guide on any future construction of this act. My understanding of Senator Smoot's statement is that he considers the expressions used in this act as ample to include all printing of the faces of silver and gold certificates by the hand-roller plate printing process and that his only reason for not wanting—at or least a substantial reason for not wanting—to make a specific statement in the act itself is because the act carries upon its face that construction.

Senator SMOOT. That is exactly what I would like to have go into the record and also to be placed before the committee.

Mr. RALSTON. I appreciate Senator Smoot's position upon the matter, and from his statement and from my own standpoint, as a lawyer, I hope you will permit me to say that I agree with him; but I should greatly appreciate also a confirmation of that understanding by the committee. I am sure all the members of the committee agree to that proposition; but I would like to have the record show it, so in the event that we have to make an argument at any future time before the Comptroller of the Treasury it can be presented.

Senator GALLINGER. I would like to make a motion to that effect: That it is the understanding of the committee that the terms of the present law cover the printing of silver and gold certificates, and that this agreement is in accordance with the law.

Senator CHILTON. You mean silver and gold certificates used as money by the people generally?

Mr. RALSTON. Used as paper money.

Senator FLETCHER. It seems to me that the language "paper money issued by any of the insular possessions" is rather broader than "notes." Anyhow, I think the term "paper money" will certainly cover it. You have that language in the proposed agreement, "paper money issued by any of the insular possessions."

Senator SMOOT. I call for the question.

The CHAIRMAN. Are you ready for the question?

Thereupon, Senator Gallinger's motion, to the effect that it is the understanding of the committee that the terms of the present law cover the printing of silver and gold certificates and that the proposed agreement is in accordance with the law, was unanimously adopted by the committee.

Mr. RALSTON. The vote shows that it is unanimous.

I incorporate as part of my remarks the affidavit of George P. Foster, which reads as follows:

*To whom it may concern:*

With respect to the question now before the Congress of the United States as to the difference between power-press printing and hand-press printing, I desire to give my opinion as a practical plate printer of over 17 years of experience in the Bureau of Engraving and Printing, and now as general manager of an establishment in Habana, Cuba, using power presses.

The power press, under the most favorable conditions, can not execute the work printed on a hand press for a number of reasons:

First, and the most important, is the action of the wiper on the plates, which removes the ink from the plate in a rough, crudé fashion, without regard to the engraved lines. Being mechanical, it can only wipe in a certain, fixed manner, and as the lines in an engraved plate run in every direction, according to the design and intention of the engraver, those lines that run parallel with the stroke of the wiper are wiped out, or nearly so. This produces an impression that has a flat, light appearance, which is characteristic of power-press work.

The best proof of the merits of the two presses is to take a plate, print an impression by the power-press method, then fill in, wipe and polish the same plate by hand; then compare the two impressions. The power impression is flat and lifeless, the hand impression is full of vigor and color, on account of the greater amount of ink left in the plate by the skillful manipulation of the hand rag. Second, the ink roller on the power press passes over the plate only once, filling in only the bottom of the engraved lines, while on the hand press the printer inks in his plate with from four to six strokes of his hand roller. Therefore, it can be plainly seen that the method which places the least amount of ink in the engraved lines will consequently produce an impression of less color and life than the method which places a greater amount. An examination of the plate, after it has passed under the ink roller of the power press, will verify the above statement, as the engraving will show through the coat of ink.

The lack of control which the printer has over the power press is another weakness. The press runs so swiftly that he has no time or opportunity to use judgment in the production of the impression. The materials used in the process of plate printing, such as wiping rags, blankets, ink, and paper, vary in degree. The rags run soft and stiff, blankets hard and soft, ink thin and thick, and the paper dry and wet, and it is absolutely necessary that the printer change his method of production as he notes the various degrees of change in the materials that come to hand during a day's work. On a hand press this is easily accomplished, and it is the procedure followed by every hand-press printer. Ever since power presses have come under my immediate supervision, I have watched their operation closely and daily examined the printed work, and the opinion I have always held, namely, that the hand-press method is far

superior, has been intensified by actual practical experience, and I am firmly of the opinion that the United States Government would make a grave error by the introduction of power presses in the Bureau of Engraving and Printing to print the bonds, notes, and checks of our country.

GEORGE P. FOSTER.

HABANA, CUBA,

February 1, 1912.

Sworn to and subscribed before me, the undersigned, this 1st February, at Habana, Cuba. Witness my hand and the seal of this consulate general.

[SEAL.]  
[STAMP.]

JOSEPH A. SPRINGER,  
Vice Consul General.

I think that finishes all our work, so far as I am concerned.

Senator SMOOT. Mr. Chairman, I move that it is the sense of the committee that it approve the proposition submitted by Mr. Ralph and the representatives of the plate printers' union, effecting a compromise upon the question of hand and power presses for printing United States bonds, notes, and checks.

Senator FLETCHER. I offer as an amendment that the bill be amended in accordance therewith.

Senator SMOOT. In answer to that, Senator, I propose to follow this motion up by striking section 85 from the bill, because this amendment is intended to be submitted to the House in an appropriation bill. Therefore I shall move, if this agreement is adopted, to strike out section 85.

The motion of Senator Smoot, that it is the sense of the committee that it approve the proposition submitted by Mr. Ralph and the representatives of the plate printers' union, was unanimously adopted.

Senator FLETCHER. I think, Mr. Chairman, it is well to say that this committee feels indebted to the plate printers and their counsel for their assistance in arriving at this solution, and that we appreciate fully the value of the art they are so much interested in.

Senator GALLINGER. I also personally, as a man who has stood in the past pretty firmly in behalf of the plate printers, wish to say that I feel profoundly gratified that so equitable a compromise has been reached, and I think not only the plate printers but the Director of the Bureau of Engraving and Printing deserves great credit for bringing it about. It is a troublesome question which has been solved very wisely.

Mr. RALPH. Thank you.

Senator SMOOT. And I want to say to the plate printers that all of the letters of condemnation I have received and the anonymous letters I have received I have never blamed your organization. I knew that they came from men who felt that they were aggrieved, and I want to say that I never had a thought of doing anything by way of legislation in this bill, or otherwise, which would hurt any man in the Government service. I have not the slightest ill-will toward any member of your organization. I would do anything in the world to help them whenever I can. I have tried upon every occasion to meet any requests that have been made of me by any member of the organization. I want to say that I am glad this successful compromise has been effected, and I believe it will not only help the men but that it will be the means of bringing about a better feeling in the future.

I would also like to ask the chairman of the executive committee of the union to take notice of the recommendation of Director Ralph

in relation to notifying the labor organizations of the country of this agreement acceptable to both sides. I do this, not particularly for my own self, but for the reason that I know Congressmen and Senators have received petitions on the subject, and I think your organization can do it ever so much better than anyone else.

**STATEMENT OF MR. S. E. BEACH, CHAIRMAN EXECUTIVE BOARD,  
PLATE PRINTERS' UNION.**

Mr. BEACH. Mr. Chairman and gentlemen of the committee, as the representative of the plate printers' executive board, and having interested myself in bringing about the campaign throughout the country that has resulted in this compromise, which I believe to be for the best interests of both sides concerned, I want to say that I will do all that can possibly be done to notify all labor organizations that have been petitioning in the past as to this favorable settlement of our difficulty. That will be done some by correspondence directly from the plate printers' organization and, I believe, some will be done through the American Federationist and by the more than 300 editors of the labor press throughout the United States.

In conclusion, I want to say that I thank the committee for the courtesy we have received. I want to thank Mr. Ralph and the other officials of the Bureau of Engraving and Printing for the courtesy and the attention with which they have met us here, also Senator Smoot and all other Senators and Representatives who have met here on this proposition in the past. I believe this amicable settlement will, in a few years, if lived up to in good faith, result in a betterment of conditions of the employees of the Bureau of Engraving and Printing, who are as hard-worked as are the employees of any factory in the United States.

Senator CHILTON. As I understand it, while this bill was reported back to the Senate, we never decided as a committee on section 85. That was left open by the committee.

Senator SMOOT. Yes; that was left open by the committee.

Senator CHILTON. This committee never reported this section 85 as being the action of the full committee.

Mr. RALSTON. And I understand it is now to be eliminated.

Senator SMOOT. So that you will all thoroughly understand it, I want to say this: Perhaps there was a misunderstanding between myself and the representatives of the union. If a member of the union had asked me as chairman of the committee—I was chairman at that time—for a hearing upon this proposition I would have gladly granted that request; but the correspondence I had with the former chairman of your executive committee, Mr. Foster, led me to believe that whenever they desired a hearing they would ask for it. Such a request was never made of me, however, and that is the reason why I did not call a special meeting for the hearing. As soon as the Secretary of the Treasury returns to the city, I shall tell him that, in my judgment, this compromise is the very best thing that could have been accomplished, not only for the men, but for the Government.

Mr. RALSTON. I am simply going to add that the courtesy with which we have been received here is the strongest possible evidence

that it was only through a misunderstanding that we were not received in the first place.

Senator SMOOT. I move that section 85 be stricken from the bill and that section 86 be renumbered section 85.

Senator CHILTON. I want to suggest that in reporting the bill back, so the Senators will understand it, a statement be made to the effect that section 85 had all the time be left open.

Senator SMOOT. We can make that statement on the floor. It will simply be stricken out at this time. Now, there are some amendments to the bill which we have received from the departments that we will want to consider, perhaps, at a later time.

Senator Smoot's motion to strike out section 85 of the bill was unanimously adopted.

Senator GALLINGER. The bill now remains in the committee for the further consideration of these new amendments?

Senator SMOOT. Yes.

The CHAIRMAN. The committee will now adjourn.

Thereupon, at 5 o'clock and 50 minutes p. m., the committee adjourned to meet at the call of the chairman.

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Power press, if I felt that by the introduction of, injury would accrue to a single plate printer, I would shirk the duty imposed upon me to-night..	7
Power press; maximum running we have is 4,500 impressions; printer could easily run 5,500 if he tried.....	20
Practical plate printer, engraver or transferrer, or photographer, not in the sense that you would call practical; think my experience is worth something.....	16
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Saving, upon basis of estimated quantity required for fiscal year 1913, if backs of United States and national-bank notes were printed eight-subject on power presses and the faces four-subject on hand presses would be \$648,970; if backs were printed four-subject on power presses and the faces four-subject on hand presses would be \$460,320; if 20 per cent of notes were printed on power presses as contemplated would be about \$80,000.....	9, 10
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Ink used to print faces of \$1 silver certificates; not a drop of power-press ink was used; can use in power press whatever kind one wants to; if it is too thick, it thickens up in the fountain; a printer is supposed to clean his fountain without being told, whenever he finds it necessary.....	56
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Almost positive that printer did not wipe off all of the impressions on power press; one was printed without either wiping or polishing..	156, 157
Among the 35 impressions shown, do not find one that is first class; most of them look as if they had not had the proper pressure; do not think would have gotten any better results if had taken a back man who had never worked on faces.....	157, 158, 159
If same job had been started on hand press with a new plate, do not think there would have been as large a proportion of imperfect notes as was with the work done on power press, because can adjust that press more quickly and get at it more rapidly.....	158, 159
Ink, currency, used instead of regular ink because it was the first job on power presses, and I started it with same as was used by hand presses; press would have operated better with ink used on revenue, which is softer, wipes better, and flows better out of the fountain....	51, 52, 55, 56
Printed on power press; thought they were very good; in fact, was surprised because of the little time it took to start; did not really have time to get a good impression.....	51, 56, 57
Took about 35 minutes to print the 40 specimens on power press; that did not include the preparation; conditions under which they were printed.....	52, 53, 54, 55
Was present on the day on which Poole printed faces of; prepared the press for the job; took me about 20 minutes to rig it up; had it adjusted ready to operate; had not favored the job on the press..	50, 51, 53, 55
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Power press—	
Can start a job to get running in half an hour or two hours, according to the job; in years gone by we have been as long as six or eight weeks, but we have progressed very rapidly in the last few years.....	51, 55
From what I have seen it do, am satisfied that it can print the work as good as four-fifths of the printers.....	52, 57
Is undoubtedly superior to one of 18 years ago; many improvements; I have suggested a few and have put in those that have been suggested; easier for a man to work on than the hand press; ordinary plate printer would prefer to a hand press; wages are better and the work lighter.....	51, 53
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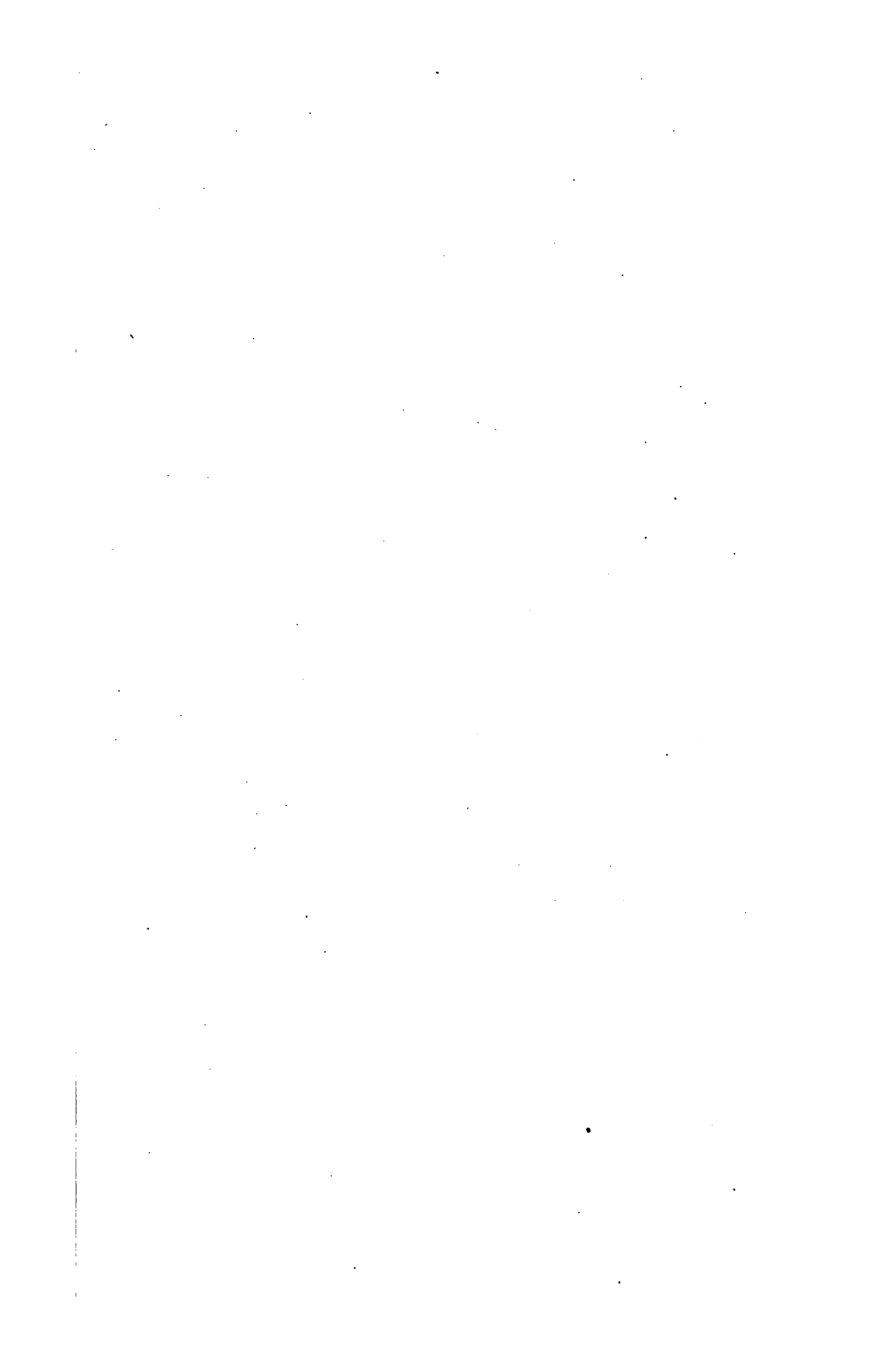
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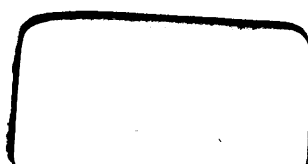




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